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# NAVAL POSTGRADUATE SCHOOL

## Monterey, California



# THESIS

Examination And Implementation  
Of A Proposal For A Ph.D. Program in Administrative Sciences

by

Robert D. Randall Jr.

March, 1992

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Examination and Implementation Of A Proposal For  
A Ph.D. Program In Administrative Sciences

by

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B.S., The University of West Florida 1985

Submitted in partial fulfillment of the requirements  
for the degree of

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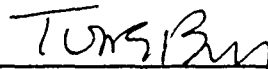
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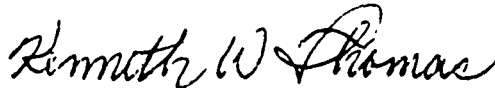


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## ABSTRACT

The purpose of this thesis is to conduct a feasibility study for establishing a Ph.D. program for the Administrative Sciences department and to prepare a Ph.D. proposal to submit to the Academic Council for program approval. According to the Academic Council requirements regarding the Ph.D. program, the following questions are addressed: (1) does the department have an active masters program; (2) does the department offer adequate physical facilities to support Ph.D. research; (3) is the faculty diverse enough; (4) is the faculty currently active in research; (5) does the faculty have sufficient doctoral program experience; and (6) does the department have sufficient faculty members in the subfield where it is proposed to award the doctorate. The results of this study indicate that the Department of Administrative Sciences meets all the criteria set forth by the Academic Council Policy Manual (Section 259). A strong Administrative Sciences doctoral program would strengthen the Naval Postgraduate School's mission to serve DON/DOD advanced educational needs.



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## **I. INTRODUCTION**

The purpose of this study is to investigate the feasibility of a Ph.D. program in the Department of Administrative Sciences and to develop a final proposal for a Ph.D. program which may be submitted to the Academic Council. This study was initiated by the Administrative Sciences Departmental Ph.D. Feasibility Committee to determine whether a Ph.D. program is feasible and how it will be implemented.

### **A. ORGANIZATION OF THE THESIS**

This chapter discusses the organization, purpose and elements of the thesis. Chapter II investigates the importance for the U.S. Navy and Department of Defense (DoD) of providing an advanced education in administrative sciences to military officers and DoD civilians. Chapter III briefly reviews standards and policies set forth by the Academic Council for Departments that plan to offer a Ph.D. program at the Naval Postgraduate School (NPS). The techniques used in collecting and analyzing the data are discussed in chapter IV. Finally, a summary of results is provided in chapter V. Appendix A excerpts sections from the Academic Council Policy Manual regarding the Ph.D. program. Appendix B is the proposal for a Ph.D. program. It addresses the criteria set forth by the Academic Council in its Policy Manual section 259. Appendix C is the proposed fields of study in Administrative Sciences. It is based on the requirements and procedures set forth in section 250, 255, and 256 of the Academic Council Policy Manual. Appendix D contains an introduction to the

faculty. It serves as a supplement to the proposal for a Ph.D. program and also addresses additional criteria listed in section 259. As previously cited, Appendix A of this thesis contains extracts of sections 250, 255, 256, and 259 from the Academic Council Policy Manual.

## **B. METHODOLOGY**

The intent of this thesis is the preparation of a Ph.D. proposal for the Department of Administrative Sciences. To achieve this goal, the following research activities were under taken:

- Data Collection (e.g., recent enrollment, graduation statistics; faculty publications, master's theses advised, and research topics).
- Curricula Reviews (e.g., Information Technology, Logistics, and Management).
- Study of Ph.D. programs offered by major academic institutions similar to the Naval Postgraduate School (e.g., New York University and University of California at Berkeley).
- Analysis of the NPS Academic Council guidelines for the establishment of a Ph.D. Program (i.e., Section 259 of A.C. policy manual).
- Review of two proposals recently approved by the Academic Council (i.e., Computer Science and Mathematics Departments).

## **C. SCOPE OF THE STUDY**

Since WWII and through the computer age, the application of administrative science theory and methodologies from the behavioral sciences and quantitative methods from the applied sciences has resulted in an accelerated rate of knowledge and information acquisition. The professional development provided to military officers and DoD civilians through an advanced education in administrative sciences will provide the U.S. Navy and DoD with well educated

personnel. These personnel will make major contributions as future leaders and managers who will be identifying and solving future problems, as well as in the application of new technology and methodology to existing problems.

There are good reasons to argue that:

- The level of administrative sciences education provided by a master of science degree does not provide the U.S. Navy or DoD with adequately trained personnel in research methodologies.
- In today's highly information intensive government organizations, there is a shortage of doctorally trained people in administrative sciences while at the same time people with administrative sciences backgrounds are in great demand.
- Administrative Sciences scholars will fill vital and demanding roles in the U.S. Navy and DoD, providing people who firmly understand the technical and organizational aspects of computer-based systems which support the U.S. Navy and DoD.

This study will provide the Department of Administrative Sciences with guidance for the implementation of a Ph.D. program in the approved fields of study in administrative sciences.

#### **D. RESEARCH QUESTIONS**

- Is it feasible to implement a Ph. D. program in the Administrative Sciences Department?
- What are the faculty resources available to successfully implement and maintain a Ph.D. program in the Administrative Sciences Department?
- What are the requirements for a Ph. D. minor program in the Administrative Sciences?
- What are the administrative requirements, prescribed by the Academic Council, for starting a Ph.D. program?
- What are the approved fields of study for the Administrative Sciences?

## **II. IMPORTANCE OF AN ADVANCED EDUCATION IN ADMINISTRATIVE SCIENCES**

### **A. INTRODUCTION**

The field of administrative sciences encompasses accounting, economics, financial management, logistics support, behavioral sciences, management theory, operations analysis, statistics, information systems, and communications network systems. The ultimate goal of a Ph.D. education in administrative sciences is to educate students who will advance the state of knowledge in administrative sciences through research, study, and teaching of administrative sciences. An advanced education in administrative sciences will enable students not only to become critically familiar with the sophisticated technical and theoretical disciplines underlying the field of administrative sciences, but to develop the capacity to make major contributions in the creation and dissemination of innovative ideas.

### **B. ROLE OF A PH.D. PROGRAM IN ADMINISTRATIVE SCIENCES**

The role of a Ph.D. program in Administrative Sciences at the Naval Postgraduate School is to serve the advanced educational needs of the Navy and to support the broad requirements of the NPS mission:

To conduct and direct the advanced education of commissioned officers, and to provide such other technical and professional instruction as may be prescribed to meet the needs of the Naval Service, and in support of the foregoing, to foster and encourage a program of research in order to sustain academic excellence. [Ref. 1: p. 7]

The Ph.D. program in Administrative Sciences also supports the expanded mission of NPS as set forth by the Secretary of Navy:

The Naval Postgraduate School exist for the sole purpose of increasing the combat effectiveness of the Navy and Marine Corps. It accomplishes this by providing post-baccalaureate degree programs in a variety of subspecialty areas not available through other educational institutions. NPS also supports the Department of Navy through the continuing programs of high-level naval and maritime research and through maintenance of operational commands, laboratories, systems commands and headquarters activities of the Navy and Marine Corps. [Ref. 1: p. 7]

A Ph.D. program in Administrative Sciences will provide an outstanding opportunity for the Navy and DoD to achieve its goal of maintaining its commitment to an operationally focused officer corps while increasing its pool of intellectual resources at the Ph.D. level in critical areas of advancing knowledge and technology. This opportunity is especially important with the Navy and DoD's present need to trim down its force structure while still maintaining its overall effectiveness and ability to advance in knowledge and technology. Without this program, it will be impossible for DoD to offset the

growing deficit in human resources educated in areas with acute shortages in Ph.D's, nor will it be possible to exploit new technologies such as expert systems and decision support systems, and the management of these technologies, to aid its next generation of managers [Ref. 2: p. 2-4].

### **C. BENEFIT OF A PH.D. PROGRAM IN ADMINISTRATIVE SCIENCES AT NPS**

The Administrative Sciences best supports the NPS mission through several key educational elements. A Ph.D. program will:

- Provide military officers and selected Department of Defense (DoD) civilians with the best educational resources to pursue the highest levels of knowledge in the Administrative Sciences. The purpose of a Ph.D. program in Administrative Sciences is to educate the future leaders and managers of human and financial resources who will advance the state of knowledge in their specific fields. [Ref. 3: p. 2]
- Enhance significant research in all areas of Administrative Sciences relevant to DoD. Especially with the rapid developments in technology coupled with the explosive growth in the science of management and decision making areas [Ref. 4: p. 2]. It is important for a Ph.D. program to develop individuals who will make major contributions in the creation and dissemination of new research in areas vital to the Navy and DoD. The skills and knowledge base of its officers in a Ph.D. program will provide significant research as part of the process toward fulfillment of a Ph.D. program.
- Provide the opportunity for administrative sciences' researchers to interact with other universities, DoD agencies, industries and laboratories who are working on the leading edge of new ideas and technologies concerning management issues and information systems development. [Ref. 5: p. 3]
- Support the quality of advanced course offerings at NPS. The advanced research supported by a Ph.D. program will greatly enhance the development and implementation of advanced courses. In the end, the quality of research and teaching improves. [Ref. 6: p. 1]

- Serve the Navy and DoD by providing future management and information science professionals to teach undergraduates at our service academies and ROTC units or to conduct research for the Navy and DoD.

### **III. ACADEMIC COUNCIL STANDARDS AND REQUIREMENTS FOR A PH.D. PROGRAM**

#### **A. PURPOSE**

The Academic Council is an advisory board that provides advice and assistance to the Provost at his request. The major concern of the Academic Council is twofold: Quality control and educational development. With respect to quality control, the Academic Council is concerned with the school academic programs. With respect to educational development, the Academic Council is concerned with how to promote excellence in graduate education. [Ref. 7: p. 1]

The Academic Council is also charged with establishing, monitoring, reviewing, certifying, and advising the Provost on policies and procedures which will produce high academic standards for graduate education which are consistent throughout the Naval Postgraduate School. This mission is carried out by conducting reviews of all the schools curricula and degree programs. These reviews are implemented through the formulation of standards, policies and procedures; by reviewing requests for waivers and deviations from the standards for students with special circumstances. [Ref. 7: p. 2]

#### **B. COMPOSITION OF THE ACADEMIC COUNCIL**

The Academic Council consists of school representatives and academic activities representatives. The school representatives and academic activities representatives are respectively listed in Tables 3-1 and 3-2.

TABLE 3-1

ACADEMIC COUCIL  
SCHOOL REPRESENTATIVES

Academic Dean - Chairman  
Dean of Academic Administration - Secretary  
Dean of Science and Engineering  
Dean of Information and Policy Sciences  
Director of Programs  
Chairman of Faculty Scholarship Committee  
[Ref. 7: p. 3]

TABLE 3-2

ACADEMIC COUNCIL  
ACADEMIC ACTIVITIES REPRESENTATIVES

Department of Computer Science  
Department of Mathematics  
Department of Administrative Sciences  
Department of Operations Research  
Department of National Security Affairs  
Department of Physics  
Department of Electrical Engineering  
Department of Meteorology  
Department of Aeronautics  
Department of Oceanography  
Department of Mechanical Engineering  
Anti-Submarine Warfare Academic Group  
Space Systems Academic Group  
Electronic Warfare Academic Group  
Command, Control, and Communications Academic Group  
[Ref. 7: p. 3]

### **C. ORGANIZATION OF THE ACADEMIC COUNCIL DOCTORAL COMMITTEE**

The Academic Council's Doctoral Committee is one of three standing committees (Doctoral Committee, Special Programs Committee, and Curricula and Degree Requirements Committee). Each standing committee consists of five members of the Academic Council. The responsibilities of the doctoral committee is to establish doctoral committees for students; approve changes to a candidate's doctoral committee; establish operating procedures and standards for the doctorate and review all items and issues that may fall within the responsibility of other committees, but which pertain to the doctoral degree. [Ref. 7: p. 6-8]

In addition to these specific responsibilities, the doctoral committee is required, upon the request of the Council or the Chairman, or on their own initiative to recommend Council action on agenda items; propose new items for the agenda; recommend changes to the Academic Council's policies, or if necessary, create an ad hoc committee to provide the Council with recommendations for changes to its current policies; and to support the actions of the Academic Council in accordance with section 110 of the Academic Council's Policy Manual and as specified by the Naval Postgraduate School Organization and Regulations Manual. [Ref. 7: p. 8]

#### **D. ACADEMIC COUNCIL REQUIREMENTS AND PROCEDURES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**

The procedures and requirements set forth by the Academic Council to obtain a degree of doctor of philosophy at the Naval Postgraduate School are outlined in section of 250 of the Academic Council policy manual. This section is reproduced in Appendix A of the thesis. It provides information concerning admission, the doctoral committee, qualifying examination, the language requirements and minor fields, advancement to candidacy, the dissertation research, the final examination, the time limits and re-examinations, the award of the degree, and termination of a candidate's program. Section 250 also contains a list of academic departments authorized to award the Ph.D.

#### **E. ACADEMIC COUNCIL REQUIREMENTS AND PROCEDURES FOR DISSERTATIONS**

Section 255 and 256 of the Academic Council's policy manual outline the guidelines for the selection of dissertation supervisors and the acceptance of doctoral dissertations. These sections are also reproduced in Appendix A of this thesis.

#### **F. ACADEMIC COUNCIL REQUIREMENTS AND PROCEDURES FOR DEPARTMENT PLANNING TO OFFER A PH.D PROGRAM**

Specific requirements for a department desiring to implement a Ph.D. program at the Naval Postgraduate School are outlined in section 259 of the Academic Council policy manual. Section 259 is reproduced in Appendix A of this thesis. This section also provides information concerning submission criteria for a department desiring a Ph.D. program.

## **IV. METHODOLOGY**

### **A. RESEARCH APPROACH**

The following information has to be provided on the request for a Ph.D. program:

- Admission to the program
- The Doctoral Committee
- The Qualifying Examination
- The Language and Minor Fields
- Advancement to Candidacy
- Dissertation Research
- The Final Examination
- The Time Limits and Re-examinations
- The Award of the Degree
- Termination of a Candidate's Program

Furthermore, the requesting department has to demonstrate its strength and capabilities to implement a Ph.D. program in accordance with section 259 of the Academic Council Policy Manual cited in chapter III (section F). The following criteria have to be met by the Department of Administrative Sciences in order to offer a Ph.D. program:

- The department should have an active Master's program.
- The department must offer adequate physical facilities (i.e. laboratories, equipment, instruments and libraries) for conducting research.
- The department's faculty must be diverse enough to provide an effective program.
- The department must have a sufficient number of faculty members who hold the doctorate and are currently active in research.

- The department's faculty must have sufficient experience, here or elsewhere, in serving on doctoral committees or otherwise being involved in supervising doctoral programs.
- The department must offers the Ph.D. candidate sufficient opportunities to interact with other advanced students both in research and coursework.

The primary research effort of this thesis is to gather data from recent enrollment information, graduation statistics, faculty publications, master's thesis advised, current research topics and teaching experience, physical facilities and support staff available. In addition, this thesis analyzed section 250 of the Academic Council Policy Manual, and used the recently approved proposals for Ph.D. programs from the Department of Mathematics and Computer Science as guidance. [Ref. 5 and Ref. 6]

## **B. DATA SOURCES**

### **1. Master's Program**

Data concerning the Department of Administrative Sciences master's program were gathered from the Naval Postgraduate School's 1990-1991 School Catalog [Ref. 1: p. 27-47] and the curricular offices. The Department of Administrative Sciences master's programs are reproduced in Appendix C as part of the Department's proposal for a Ph.D Program.

### **2. Faculty**

The faculty data were gathered from Naval Postgraduate School listings for publications from FY81 to FY90 [Ref. 8 through Ref. 16] and Master's thesis data from FY81 to FY89 [Ref. 17 through Ref. 25] Publications data from FY91 and Master's thesis information from FY90 to FY91 were not available from official NPS listings and subsequently had to be compiled from the department of Administrative Sciences' internal records. Since many members of the faculty held positions in other schools prior to accepting a position at NPS,

their information was not complete. Therefore, a questionnaire was distributed to all faculty members requesting information concerning their publications output, Master's theses advised and teaching experience.

### **3. Student Enrollment**

Student graduation data for FY90 and the first two quarters of FY91 were collected from the school's admissions department via their mainframe database. Graduation data from the third quarter of FY91 as well as current enrollment data were collected from the curricular offices for each of the three program which are offered by the administrative sciences department, (Computer Systems Management, Telecommunications Systems Management and all the Administrative Sciences curricula).

### **4. Physical Facilities and Support Staff**

Physical facilities and Support staff data were collected from Department of Administrative Sciences Departmental Administrative Office.

## **V. RESULTS AND CONCLUSION**

### **A. RESULTS**

As cited in Chapter IV, there are several criteria that must be met by the Department of Administrative Sciences before its Ph.D. program can be approved by the Academic Council. Therefore, the purpose of the research in chapter IV was to determine if those criteria have been met.

#### **1. Active Master's Program**

The first criterion is to have an active master's degree program. As demonstrated by the number of students who have graduated and who are currently enrolled, the Department of Administrative Sciences master's program plays a very active role in the professional development of military officers and DoD civilians. The Department of Administrative Sciences offers three academic programs and awards three graduate degrees. The largest program is a group of six curricula in Administrative Sciences. These curricula include Acquisition and Contract Management, Financial Management, Manpower/Personnel/ Training Analysis, Material Logistics Support, Systems Inventory Management and Transportation Management. Graduates of these curricula are awarded a Master of Science Degree in Management. The Administrative Sciences curricula are accredited by the National Association of Schools of Public Affairs and Administration. The next largest program is the Computer Systems Management curriculum. Graduates of this curriculum are awarded a Masters of Science Degree in Information Systems. Finally, the last program is the Telecommunications Systems Management curriculum.

Graduates of this curriculum are awarded a Masters of Science Degree in Telecommunications Systems Management. These two curricula however, are being replaced by a new eight quarter curriculum, the Information Technology Management which had its first input on 1 OCT 91.

In the academic year of 1989-90, there were 172 graduates with an MS in Management, 63 graduates with MS in Information Systems and 43 graduates with MS in Telecommunications Systems Management. Through the first three quarters of the academic year 1990-91, there were had 120 graduates with MS in Management, 61 with MS in Information Systems and 17 with MS in Telecommunication Systems Management. Currently, in the Summer of 1991, there were 326 majors enrolled in the Administrative Sciences programs, 174 enrolled in the Computer Systems Management program and 30 enrolled in the Telecommunications Systems Management program.

As previously mentioned, the Administrative Sciences Master's Program is the largest program on campus. It is a six-quarter curriculum and is interdisciplinary in nature. This program consists of two parts: Core course program which integrates mathematics, accounting, economics, behavioral science, management theory, operations/systems analysis and a subspecialty concentration into an understanding of the process by which the defense mission is accomplished. The subspecialty options and their core course requirements are listed in Appendix C of this thesis.

## **2. Physical Facilities**

The second criterion is adequate physical facilities. The Department of Administrative Sciences and NPS provide several computing resources to support research by Ph.D. candidates. These resources include:

- the NPS mainframe computer.
- three micro-computer laboratories with local area networks dedicated to the Department of Administrative Science for instructional and research purposes.
- links to other data centers and computers through several networks such as DDN, INTERNET, BITNET and the MILNET.
- specialized software to conduct research and development of expert systems, decision support systems, statistical analysis and database management systems.
- the faculty also has a number of computing resources directly related to their research.

In addition to the above computing resources, the Dudley Knox Library with its approximately one million bibliographical volumes (books, research reports and journals) in hard copy and microform, its sophisticated online information resources, and its access to a vast interlibrary loan system will provide strong support for Ph.D. candidates in Administrative Sciences as it has in the past for other doctoral candidates. The current selection of books and journals already on campus will provide the Ph.D. candidate with ample material to support research in all areas of Administrative Sciences. The Department of Administrative Sciences will work in cooperation with the Main Library to ensure continued acquisition of vital research material to maintain suitability for the Administrative Sciences Ph.D. program. [Ref. 26 ]

### **3. Faculty**

The third criterion requires the department to demonstrate its diversity, experience with Ph.D. programs and that its faculty is currently active in research. The Department of Administrative Sciences is the largest academic department on campus, both in terms of faculty and students. The department has fourteen full professors, twenty associate professors, nineteen assistant professors, seventeen adjunct professors, nine military instructors and nine support staff members. In addition, the department has been very successful over the last five years in attracting a number of distinguished scholars to fill the Grace Murray Hopper Chair in Computer Science.

The department's faculty has long been recognized for its dedication to outstanding teaching and research in areas vitally important to the U.S. Navy and the Department of Defense. The department leads the school in attracting reimbursable research funding.

Faculty members in the department serve as reviewers for NSF and its International Counterpart. They also serve as editors and referees for leading journals such as Management Science, Information Research Management, Operations Research, Transportation Science, The American Economic Review, Administrative Sciences Quarterly, The Accounting Review, and the Academy of Management Review and Journal.

The department has an active research relationship with other universities and research institutes, for instance, MIT, Carnegie-Mellon University, New York University, the University of Pennsylvania, the University of Michigan and AT&T Bell Labs. Many of our faculty have co-authored papers and books with faculty members and researchers at these institutions.

The complete summary of quantitative data collected on departmental faculty is shown in Table 5-1. The first three columns deal with faculty publication information. These include books written or co-written by a specific faculty member, the total number of book chapters, proceedings and journal articles written or co-written by a specific faculty member and the number of technical reports produce or co-produced by a faculty member. The last three column indicate years taught, Master's theses advised and participation in Ph.D. work. As shown in Table 5-1, the faculty professional productivity and contributions are significant. Additionally, a close examination of the information in appendices B coupled with the information in Table 1 indicates current faculty research is strongly oriented in areas of vital concerns to the U.S. Navy and DoD. These areas include information and telecommunication systems, integrated logistic and transportation, acquisitions, financial management, manpower, and management policies and decision making.

#### **4. Opportunity**

The final criterion is opportunity for the Ph.D. candidate to interact with other advanced students in course work and research. As cited above, the Department of Administrative is very active in research. Currently most of this research is conducted by the faculty with assistance from master's students. As stated in chapter II, the purpose of an advanced education in Administrative

Sciences is to educate scientists who will advance the state of knowledge in their respective field. There will be a strong emphasis for the doctoral student to become immediately involved in research activities. Secondly, the program will be small compared to other institutions. The smaller size will allow tailoring of the student's program to promote better interaction with other students and to promote a better climate to conduct research. Required courses will provide ample opportunity to interact with advanced master's students and other Ph.D. students.

**TABLE 5-1**  
**PUBLICATIONS AND TEACHING RECORD FOR FULL TIME FACULTY**

	Books	Book Chap/ Proceedings/ Journals	Technical Reports	Years taught	MS Advised	Ph. D. Committee/ Supervised
Whipple	4	9	23	23	127	3/0
Abdel-Hamid	1	20	0	5	17	2/0
Barrett	0	8	0	8	0	0/0
Bhargava	0	6	3	2	0	0/0
Boger	0	19	23	12	253	5/0
Brown	0	3	6	3	0	0/0
Bui	4	29	3	14	50	3/1
Carrick	0	2	2	22	51	0/0
Doll	0	27	15	9	17	2/0
Doyle	0	1	0	9	0	0/0
Eitelberg	4	28	18	9	28	0/0
Elster	0	2	19	22	29	0/0
Euske	3	50	24	13	73	0/0
Evered	2	26	5	36	39	20/10
Fremgen	1	17	1	32	53	0/0
Frew	0	0	0	6	39	0/0
Haga	2	20	7	19	41	0/0
Harris	4	12	20	13	48	5/1
Henderson	1	26	8	11	20	3/0
Hocevar, S.P.	0	4	5	2	5	0/0
Horton	0	0	0	0	11	0/0
Jones C.R.	2	10	6	26	42	5/1
Jones L.	5	35	3	14	32	8/2
Kamel	0	16	3	4	15	0/0
Kang	0	17	6	8	7	0/0
Lamm	1	28	6	13	87	1/1
Liao	1	91	19	20	49	1/0
McCaffery	0	12	0	7	34	0/0
McCaffrey	0	2	1	3	14	0/0
McMasters	0	6	23	26	140	5/0
Mehay	2	32	12	18	30	5/2
Moore	1	5	2	9	38	0/0
Moses	0	22	12	15	23	0/0
Ramesh	0	7	2	2	5	0/0
Roberts B. J.	4	10	9	14	13	15/0
Roberts N.	2	24	9	9	30	1/1
San Miguel	3	25	1	19	25	7/7
Schneidewind	0	28	10	21	67	1/1
Sessions	0	0	0	28	0	0/0
Sengupta	0	0	0	3	0	0/0
Suchan	0	27	2	16	11	0/0
Suh	0	3	1	3	20	1/0
Thomas G. F.	0	12	1	15	4	0/0
Thomas G. W.	0	21	31	20	66	0/0
Thomas K.	1	42	4	23	5	15/4
Trietsch	0	8	7	8	34	0/0
Weitzman	5	23	31	31	9	-/6
Zviran	3	19	4	4	0	0/0
Zweig	0	1	3	3	1	0/0

## **B. CONCLUSION**

The strength of the information received indicates a strong overall program which can support the school's mission to the U.S. Navy and the Department of Defense. The information suggests that the department of Administrative Sciences meets all the criteria set forth by the Academic Council in Section 259 of their policy manual for development and maintenance of an effective Ph.D. program. Appendix B through Appendix D of this thesis contains the final draft of the Department of Administrative Sciences Request for a Ph.D. program.

**APPENDIX A**  
**EXTRACTS FROM THE ACADEMIC COUNCIL**  
**POLICY MANUAL**

**A. REQUIREMENTS AND PROCEDURES FOR THE DEGREE:  
DOCTOR OF PHILOSOPHY**

(Reproduced from Section 250, Academic Council Policy Manual)

1. The degree Doctor of Philosophy is awarded as a result of very meritorious and scholarly achievements in a particular field of study which has been approved by the Academic Council as within the purview of the Naval Postgraduate School. A candidate must exhibit faithful and scholarly application to all prescribed courses of study, achieve a high level of scientific advancement, and establish an ability for original investigation leading to the advancement of fundamental knowledge.

2. Any program leading to the degree Doctor of Philosophy shall require the equivalent of at least three academic years of study beyond the baccalaureate level, with at least one academic year being at the Naval Postgraduate School. The following is a general outline of a candidate's progress through the program, with amplification in subsequent paragraphs:

- a. The student applies to the appropriate department chairman for admission to the program and is accepted (para. 3).
- b. The department chairman appoints the student's Doctoral Committee, which bears the responsibility for the study program and for general guidance in the research program (para. 4).
- c. When the student's study program is essentially complete the Doctoral Committee administers the Qualifying Examination, which must include both written and oral parts (para. 5).
- d. The study program must include one or more minors, and may include a foreign language translation requirement at the discretion of the major department.

- e. When the student's study program is essentially complete, research commences under an approved Dissertation Supervisor on a subject approved by the Doctoral Committee. At about this same time, the Doctoral Committee requests that the student be admitted to candidacy for the degree (para. 7 and 8).
- f. When the candidate investigations are completed and the dissertation has been submitted, the Doctoral Committee administers a final oral examination on the dissertation. (para. 9).
- g. After the unanimous recommendation of the Doctoral Committee, the Academic Council makes the final decision to recommend the candidate for the award of the degree (para. 10).

### 3. Admission to the program:

A student seeking to become a candidate for the Doctorate shall hold a Bachelor's degree based on a curriculum that included the prerequisites for full graduate status in the department of his/her major study, or shall have pursued successfully an equivalent course of study. The student shall submit his/her proposed major subject for determination of acceptability as a Doctoral student.

The method of screening applicants shall be the responsibility of the department, but it will usually involve a written or oral screening examination. No applicant shall take such an examination more than twice.

### 4. The Doctoral Committee:

The Doctoral Committee will be nominated by the Department Chairman and approved by the Academic Council. The Committee will consist of five or more members from at least three departments. One member of this Committee may be from another university or appropriate institution. At least four members will have earned the doctorate and the Committee may contain no more than two members who have not earned the doctorate. At the time that the above Committee is submitted for approval, or at a subsequent time no later than when the student is advanced to candidacy for the doctorate, the major Department Chairman shall designate, for the approval of the Academic Council, the member of the Doctoral Committee who shall serve as Dissertation

Supervisor. To avoid last minute problems every effort should be made to designate the Dissertation Supervisor early. If the Dissertation Supervisor is designated at a later time, the membership of the Doctoral Committee shall be augmented to include him/her if he is not already a member of the Committee. The major Department shall certify that the Dissertation Supervisor has been selected in accordance with Section 255 of this Policy Manual.

The Doctoral Committee has responsibility for the program of study, which shall include one or more minor fields, suitable to the needs of the student and the requirements for award of the Doctorate. The Doctoral Committee will keep the cognizant Curricular Officer and Department Chairman advised concerning the program of study and the progress of the candidate. In agreeing to serve on a Doctoral Committee each faculty member, and particularly the Dissertation Supervisor, thereby assumes a professional and ethical responsibility to see the candidate through the termination of his/her program.

#### 5. The Qualifying Examination:

After the student's program of study in the major and minor fields has been essentially completed, the student shall be given by his Doctoral Committee, a comprehensive Qualifying Examination over the student's program of study which shall include both written and oral parts. The written part may be administered by the major department or group in conjunction with the Doctoral Committee. The oral part shall be scheduled only after successful passage of the written part and successful passage of all the requirements for the minor field. The oral examination will be administered by the entire Doctoral Committee. The Academic Council will be invited. The results of the entire examination will be reported to the Dean of Academic Administration not later than two weeks after the scheduled date of the oral exam.

Passage of the Qualifying Examination will require a unanimous vote of the Doctoral Committee. No student may take the Qualifying Examination more than twice (para. 10). The result of the examination, whether pass or fail, shall be reported to the cognizant Curricular Officer and to the Academic Council. Each member of the Doctoral Committee shall sign the report.

## **6. The Language and Minor Fields:**

If a language requirement is to be satisfied, the student will demonstrate proficiency before an examiner appointed by the Department Chairman.

The program of study shall include one or more minor fields, as specified by the doctoral Committee, suitable to the needs of the student and to the research to be undertaken. The minor requirement will be satisfied by procedures specified by the department of the minor; these may include written or oral examination, completion of sequence of courses, etc. A written statement of minor field shall be filed by each department with the Academic Council.

## **7. Advancement to Candidacy:**

Upon successful completion of the language examination, if required, and the comprehensive examination, the student becomes eligible for advancement to candidacy. The Doctoral Committee, when submitting its written report, shall recommend that the Academic Council advance the student to candidacy for the doctorate. Affirmative action by the Academic Council on advancing the student to candidacy will require:

- a. An approved Doctoral Committee (para. 4).
- b. An approved Dissertation Supervisor (para. 4).
- c. Completion of language and minor requirements (para. 6).
- d. Successful completion of the comprehensive examinations (para. 5).
- e. An approved dissertation subject (para. 8).

## **8. The Dissertation Research:**

The distinct requirement of the Doctorate is the successful completion of a scholarly investigation leading to an original and significant contribution to knowledge in the candidate's major area of study. The subject of the investigation must be approved by the Doctoral Committee, who will report the approved subject to the Academic Council. This report must be made no later than the time of request for advancement to candidacy. In any event, the candidate must devote at least six months to research, following the date of advancement to candidacy, before presenting himself for final examination.

## **9. The Final Examination:**

When the dissertation research has been completed and a draft has been prepared to the satisfaction of the Dissertation Supervisor, a copy shall be submitted to each member of the Doctoral Committee for approval. Approval by the committee members shall signify the Committee's acceptance of the draft as a basis for the final defense-of-dissertation examination. After obtaining unanimous acceptance of the draft from the Doctoral Committee, the Chairman shall schedule an oral final examination.

This examination should not be scheduled earlier than one week following the submission of the draft of the dissertation to the Doctoral Committee. The examination will be administered by the entire Doctoral Committee. The examination will be reported to the Dean of Academic Administration not later than two weeks after the scheduled date of the exam.

In the final examination, the candidate will present his dissertation and shall be subject to such questions as the Doctoral Committee and the Academic Council may deem appropriate. Passage of the examination requires a unanimous vote of the Doctoral Committee.

The results of the final examination (whether pass or fail) shall be reported to the Academic Council, the report bearing the signatures of all the members of the Committee. If the candidate is passed, this report shall also include:

- a. Certification of acceptance of the dissertation.
- b. Nomination of the successful candidate for the award of the degree, Doctor of Philosophy.

Upon final acceptance of the dissertation, the title page shall be signed by each member of the Committee, the major Department Chairman, and the Academic Dean. Signatures of the Dissertation Supervisor, and the Department Chairman, and the Academic Dean indicate approval of the dissertation.

#### **10. Time Limits and Re-examinations:**

If a candidate, on first attempt, fails either the comprehensive or the final examination, he/she may be re-examined in each examination only once, and then only if his/her Committee so recommends. The qualifying examination consist of two parts, and the candidate may attempt each part twice. The Committee may recommend that only prescribed parts of the examination be repeated. If the privilege of reexamination is granted, the time period within which it must be accomplished shall be specified by the Committee, but it shall not exceed 13 months.

All requirements for completing the degree must be completed within a period of five years after advancement to candidacy.

#### **11. The Award of the Degree**

After receiving the report of the Doctoral Committee, the Academic Council will make the final decision whether or not to recommend the candidate to the Superintendent of the Naval Postgraduate School for the award of the Doctor of Philosophy degree.

No candidate shall participate in the graduation ceremony for the award of the degree until his/her dissertation has received the signature of the Academic Dean. In addition, the oral examination must be signed by the entire Committee before the last Council meeting of the quarter. The final version of the dissertation will be submitted to the Dean of Academic Administration before graduation.

#### **12. Termination of a Candidate's Program**

If, in the judgement of his Doctoral Committee, a student does not qualify for the degree, Doctor of Philosophy, the Committee shall recommend that the Doctoral program be terminated, and shall suggest an appropriate course of action for the student. When the Academic Council has satisfied itself concerning all outstanding questions involved and has agreed upon any necessary action, the student's Doctoral Committee will be dissolved by a formal vote.

### 13. Attendance at Doctoral Oral Examinations:

Attendance at doctoral oral examinations shall be as delineated in the table below:

<u>Category</u>	<u>Qualifying Oral</u>	<u>Final Oral</u>
Doctoral Committee Member	A, B, C	A, B, C
Designated Academic Council Representative	A, B, C	A, B, C
Other Academic Council Members	A, B	A, B
Other Faculty	A, B	A, B
Student Would-Be Candidate	A	A
Others (Staff, Students, Visitors)		A

Legend:     A - Interrogation Phase  
              B - Comment Phase  
              C - Voting Phase

**Departments Authorized To Award This Degree**

Aeronautics

Computer Science

Electrical and Computer Engineering

Electrical Engineering/ Physics  
(Engineering Acoustics)

Mathematics

Mechanical Engineering

Meteorology

Oceanography

Operations Research

Physics

## **B. GUIDELINES FOR THE SELECTION OF DISSERTATION SUPERVISORS**

(Reproduce for Section 255, Academic Council Policy Manual)

1. The Academic Council will normally expect the chairman of the proposed Doctoral Committee to serve as dissertation supervisor unless information to the contrary is supplied. The following qualifications are desirable for any proposed dissertation supervisor:

- a. The doctorate in his/her field of specialty.
- b. Prior personal experience on Doctoral Committees.
- c. Experience in advising thesis students.
- d. Activity and productivity in research in his/her field as evidenced by recent publication of his/her research in recognized journals, or a broad reputation as a productive researcher in his/her field of specialty. Other evidence may be considered which is pertinent to demonstrating research activity or productivity.

2. In exceptional cases, where the above qualifications are not obviously met, strong departmental justification must be provided.

### **C. DOCTORAL DISSERTATIONS**

(Reproduced from Section 256, Academic Council Policy Manual)

The acceptance of a candidate's dissertation, presented as partial fulfillment of the requirements for the Doctor's Degree from the Naval Postgraduate School, will not be jeopardized by the prior publication by the candidate as author or joint author of papers presenting material which later may become a significant part of the body of the dissertation or by the delivery of such papers at engineering or scientific meetings provided that the student himself or herself successfully completes an original, significant and scholarly investigation in his/her major area of study.

#### **D. STANDARDS FOR DEPARTMENTS PLANNING TO OFFER A PH.D. PROGRAM**

(Reproduced from Section 259, Academic Council Policy Manual)

1. The following criteria will be applied to a department at the Naval Postgraduate School wishing to offer a Ph.D. program:

- a. The department should have an active master's degree program.
- b. There should be adequate physical facilities (such as laboratories, equipment and instruments) for research in the scientific or engineering fields and there should be adequate library facilities in the field and subfield where it is proposed to award the degree.
- c. The faculty of the department must be diverse enough to give such a program properly. A reasonable number of the faculty should hold the doctorate and be currently active in research as evidenced by publications in the open literature. The department should have two or more qualified faculty members in each subfield where it is proposed to award the doctorate. the departments should contain faculty members who have had experience, here or elsewhere, in serving on doctoral committees or otherwise getting involved in supervising doctoral programs.
- d. There should be adequate opportunities for the Ph.D. candidate to interact with other advanced students in the department both in course work and in research, i.e., the program should not be merely an interaction between the student and a few faculty members. As most departments will have one or two Ph.D. candidates at any on time, this interaction will mainly be with students active in master's programs.

2. A department wishing to offer a Ph.D. program should submit a document to the Academic Council giving evidence that the above criteria have been met. Furthermore, the department should specify exactly those subfields in the general discipline where it plans to award the degree, and it should supply a list of departmental faculty members who are qualified to serve on Doctoral Committee for each subfield. The purpose of this list is to demonstrate the breadth of support for the proposed program. The Academic Council approves each Doctoral Committee separately; guidelines for the selection of dissertation supervisors are presented in Section 255.

3. Interdepartmental doctorates are feasible and in some cases desirable. This might make it possible for a department participate in a doctoral program where the department itself does not meet one or more of the above criteria. Two or more departments who wish to offer a joint doctoral program should follow the procedures indicated in paragraph 2.

**APPENDIX B**  
**REQUEST TO THE ACADEMIC COUNCIL FOR APPROVAL**  
**OF A PH.D. PROGRAM IN ADMINISTRATIVE SCIENCES**

**Department of Administrative Sciences**

**February 21, 1992**

- I. Introduction
- II. Role of the Ph.D. Program in Administrative Sciences
- III. An Active Masters Degree Program in Administrative Sciences
- IV. The Faculty of the Department of Administrative Sciences
- V. Requirements and Procedures for Doctoral Study
- Appendix A. Proposed Fields of Study
- Appendix B. Introduction to the Department of Administrative Sciences

## I. INTRODUCTION

In accordance with Academic Council Policy Manual, Section 259, the Department of Administrative Sciences requests approval to develop and implement a Ph.D. program in Management Information Systems, Organization and Management and Logistics at the Naval Postgraduate School.

A Ph.D. program in Administrative Sciences will provide an outstanding opportunity for the Navy and DoD to achieve its goal of maintaining its commitment to an operationally focused officer corps while increasing its pool of intellectual resources at the Ph.D. level in critical areas of advancing knowledge and technology. This is especially timely as the DoD attempts to trim down its force structure while still maintaining its overall effectiveness and ability to advance in knowledge and technology. This program, will allow DoD to offset the growing deficit in human resources educated in areas with acute shortages in Ph.D's. nor will DoD be able to exploit new technologies to aid its next generation of managers.

Appendix B contains an introduction to the faculty of the Department of Administrative Sciences which primarily focuses on the recent contributions of the faculty to the field of Administrative Sciences. A more detailed summary of specific areas is contained in Appendix A of this proposal.

The Department of Administrative Sciences and NPS provide several computing resources to support research by Ph.D. candidates. These resources include:

- the NPS mainframe computer;
- three micro-computer laboratories with local area networks dedicated to the Department of Administrative Science for instructional and research purposes;
- links to other data centers and computers through several networks such as DDN INTERNET, BITNET and the MILNET;
- specialized software to conduct research and development of expert systems, decision support systems, statistical analysis and database management systems;

In addition to the above computing resources, the NPS Main Library with its vast inter-library loan system currently available to NPS students and faculty will provide outstanding support for Ph.D. candidates in Administrative Sciences. In addition to the Main Library, the Computer Center provides an excellent technical library. The current selection of books and journals already on campus will provide the Ph.D. candidate with ample material to support research in all areas of Administrative Sciences. The Department of Administrative Sciences will work in cooperation with the Main Library to ensure continued acquisition of vital research material to maintain suitability for the Administrative Sciences Ph.D. program.

## II. ROLE OF THE PH. D. PROGRAM IN ADMINISTRATIVE SCIENCES

The purpose of the Ph.D. program in Administrative Sciences is to serve the advanced educational needs of the Navy and to support the broad requirements of the NPS Mission:

"To conduct and direct the advanced education of commissioned officers, and to provide such other technical and professional instruction as may be prescribed to meet the needs of the Naval Service, and in support of the foregoing, to foster and encourage a program of research in order to sustain academic excellence".

The Ph.D. program in Administrative Sciences will also support the expanded mission of NPS as set forth by the Secretary of Navy:

"The Naval Postgraduate School exists for the sole purpose of increasing the combat effectiveness of the Navy and Marine Corps. It accomplishes this by providing post-baccalaureate degree programs in a variety of subspecialty areas not available through other educational institutions. NPS also supports the Department of Navy through the continuing programs of high-level naval and maritime research and through maintenance of operational commands, laboratories, systems commands and headquarters activities of the Navy and Marine Corps".

The Ph.D. Program in Administrative Sciences supports the NPS mission through several key educational and research elements:

- Provide military officers and selected Department of Defense (DoD) civilians with the best educational resources to pursue the highest levels of knowledge in the Administrative Sciences. The purpose of a Ph.D. program in Administrative Sciences is to educate the future leaders and managers of human and financial resources in the Navy and DoD who will advance the state of knowledge in their specific fields.
- Enhance significant research in all areas of Administrative Sciences. Due to the rapid developments in technology coupled with the explosive growth in the science of management and decision making, it is crucial to increase research in specific areas important to DoD. A Ph.D. program seeks to develop individuals who will make major contributions in the creation and dissemination of new research in areas vital to the Navy and DoD. The skills and knowledge base of its officers in a Ph.D. program will provide significant research as part of the process toward fulfillment of a Ph.D. program.
- Provide the opportunity for administrative sciences researchers to

interact with other universities, DoD agencies, industries and laboratories who are working on the leading edge of new ideas and technologies concerning management issues and information systems development.

- Support the quality of advanced course offerings at NPS. The advanced research supported by a Ph.D. program will greatly enhance the development and implementation of advanced courses. In the end, the quality of both research and teaching improves.

- Serve the Navy and DoD by providing future management and information science professionals to teach undergraduates at other service academies and ROTC units or to conduct research for the Navy and DoD.

### III. AN ACTIVE MASTER'S DEGREE PROGRAM

The Department of Administrative Sciences offers three academic programs and awards three graduate degrees. The largest program is a group of six curricula in Administrative Sciences. These curricula include Acquisition and Contract Management, Financial Management, Manpower/Personnel/ Training Analysis, Material Logistics Support, Systems Inventory Management and Transportation Management. Graduates of these curricula are awarded a Master of Science Degree in Management. The Administrative Science curricula are accredited by the National Association of Schools of Public Affairs and Administration. The next largest program is the Computer Systems Management curriculum. Graduates of this curriculum are awarded a Masters of Science Degree in Information Systems. Finally, the last program is the Telecommunications Systems Management curriculum. Graduates of this curriculum are awarded a Masters of Science Degree in Telecommunications Systems Management.

In the academic year of 1989-90, the department graduated 172 graduates with an MS in Management, 63 graduates with MS in Information Systems and 43 graduates with MS in Telecommunications Systems Management. Through the first three quarters of the academic year 1990-91, we have had 120 graduates with MS in Management, 61 with MS in Information Systems and 17 with MS in Telecommunication Systems Management. In the Summer of 1991, we had 326 majors enrolled in the Administrative Sciences programs, 174 enrolled in the Computer Systems Management program and 30 enrolled in the Telecommunications Systems Management.

As previously mentioned, the Administrative Sciences Master's Program is the largest program at NPS. It is a six-quarter curriculum and is interdisciplinary in nature. This program consists of two parts: A core course program which integrates mathematics, accounting, economics, behavioral science, management theory, operations/systems analysis and a subspecialty concentration. The subspecialty options are in the next section.

All students are required to successfully complete or validate a total of 32 quarter hours of 2000 and 3000 level courses in the Administrative Sciences core program. In addition, this program must include a minimum of the following:

Accounting and financial management	6 hours
Economics	6 hours
Organization and management	6 hours
Quantitative methods	8 hours

**A. Administrative Sciences Master's Degree Program**  
(Extracted from Naval Postgraduate School Catalog 1991)

Each student's curriculum in the Administrative Sciences Program must include the successful completion of 48 quarter hours of graduate level course work and an acceptable thesis or project. At least 12 quarter hours of the course work must be at the 4000 level. Each student's program must be approved by Chairman of the Department of Administrative Sciences.

**Transportation Logistics Management**

This curriculum is intended to provide the officer with a Navy/DoD systems oriented graduate management education and to provide the officer with the specific functional skills required to effectively manage in this subspecialty area. The curriculum is sponsored by Naval Supply Systems Command Headquarters.

**Typical Course of Study**

**Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
IS0123	(0-2)	Computer Skills Development

**Quarter 2**

MN3161	(4-0)	Managerial Accounting
MN3140	(4-0)	Microeconomic Theory
MN3373	(4-0)	Transportation Management
OS3101	(4-1)	Statistical Analysis for Management

**Quarter 3**

MN3105	(4-0)	Organization and Management
MN3172	(4-0)	Public Policy Processes
MN4373	(4-0)	International Transportation Management
OS3006	(4-0)	Operations Research for Management

**Quarter 4**

IS3183	(4-0)	Management Information Systems
MN4145	(4-0)	Policy Analysis
MN4376	(4-0)	Defense Transportation System
NS3252	(4-0)	Joint and Maritime Strategic Planning

**Quarter 5**

MN0810	(0-0)	Thesis Research
MN0810	(0-0)	Thesis Research
MN3377	(4-0)	Inventory Management
MN3301	(4-0)	Systems Acquisition and Project Management

**Quarter 6**

MN0810	(0-0)	Thesis Research
MN4105	(4-0)	Management Policy
MN3371	(4-0)	Contracts Management and Administration
MN4154	(4-0)	Financial Management in the Armed Forces

**Transportation Management**

The objective of this curriculum are to prepare officers for logistics system positions within the Navy and to emphasize the worldwide transportation aspects of it. Graduate logistics courses cover topics such as the transportation system within Continental United States (CONUS), warehouse siting, materials management, production management, inventory management (both Navy and private sector), materials handling, purchasing and physical distribution. Students take additional courses in transportation in the private sector and military transportation in support of contingencies, as well as options in corporate financial management, production management or logistics engineering. This curriculum is sponsored by Military Sealift Command Headquarters.

**Typical Course of Study****Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
IS0123	(0-2)	Computer Skills Development

**Quarter 2**

MN3161	(4-0)	Managerial Accounting
MN3140	(4-0)	Microeconomic Theory
MN3373	(4-0)	Transportation Management
OS3101	(4-1)	Statistical Analysis for Management

**Quarter 3**

MN3105 (4-0) Organization and Management  
MN3172 (4-0) Public Policy Processes  
MN4373 (4-0) International Transportation Management  
OS3006 (4-0) Operations Research for Management

**Quarter 4**

IS3183 (4-0) Management Information Systems  
MN4145 (4-0) Policy Analysis  
MN4376 (4-0) Defense Transportation System  
NS3252 (4-0) Joint and Maritime Strategic Planning

**Quarter 5**

MN0810 (0-0) Thesis Research  
MN0810 (0-0) Thesis Research  
MN3111 (4-0) Personnel Management Processes  
MN3301 (4-0) Systems Acquisition and Project Management

**Quarter 6**

MN0810 (0-0) Thesis Research  
MN3371 (4-0) Contracts Management and Administration  
MN4105 (4-0) Management Policy  
MN4154 (4-0) Financial Management in the Armed Forces

## **Acquisition and Contract Management**

This curriculum is designed to provide officers with the skills to serve effectively in hardware systems procurement offices, field procurement offices, contract administration offices and contracting policy support offices. This curriculum is sponsored by Naval Supply Systems Command Headquarters.

### **Typical Course of Study**

#### **Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
MN2302	(0-2)	Contract Management Seminar
IS0123	(0-2)	Computer Skills Development

#### **Quarter 2**

MN3303	(4-0)	Principles of Acquisition and Contracting
MN3140	(4-0)	Microeconomic Theory
MN3161	(4-0)	Managerial Accounting
OS3101	(4-1)	Statistical Analysis for Management
MN2302	(0-2)	Contract Management Seminar

#### **Quarter 3**

MN3312	(3-0)	Contract Law
MN3172	(4-0)	Public Policy Processes
MN3105	(4-0)	Organization and Management
MN3304	(5-2)	Contract Pricing and Negotiations
MN2302	(0-2)	Contract Management Seminar

#### **Quarter 4**

MN3305	(3-0)	Contract Administration
MN4145	(4-0)	Policy Analysis
IS3183	(4-0)	Management Information Systems
NS3252	(4-0)	Joint and Maritime Strategic Planning
MN2302	(0-2)	Contract Management Seminar

#### **Quarter 5**

MN4301	(4-0)	Contracting for Major Systems
MN0810	(0-0)	Thesis Research
MN0810	(0-0)	Thesis Research
OS3006	(4-0)	Operations Research for Management
MN2302	(0-2)	Contract Management Seminar

**Quarter 6**

- MN4371 (4-0) Acquisition and Contracting Policy
- MN4105 (4-0) Management Policy
- MN0810 (0-0) Thesis Research  
Curriculum Option
- MN2302 (0-2) Contract Management Seminar

**Allied Officers, DOD Civilians, USA, USMC and USCG**

This is a highly flexible curriculum designed to provide the officers with fundamental interdisciplinary techniques of quantitative problem solving methods, behavioral and management science, economic analysis and financial management. The curriculum further provides the officers with the specific functional skills required to become effective managers. Specialty concentration areas are specified by ordering officers into a specific curriculum.

**Typical Course of Study (For Army)****Quarter 1**

- MN2150 (4-0) Financial Accounting
- MN2031 (4-0) Economic Decision Making
- MN3333 (4-0) Managerial Communication Skills
- MA2300 (5-0) Mathematics for Management
- IS0123 (0-2) Computer Skills Development

**Quarter 2**

- MN3161 (4-0) Managerial Accounting
- MN3140 (4-0) Microeconomic Theory
- OA2200 (3-2) Computational Methods for Research
- OS3101 (4-1) Statistical Analysis for Management
- MN3920 (0-2) MPT Computer Skills

**Quarter 3**

- MN3172 (4-0) Public Policy Processes
- OS3006 (4-0) Operations Research for Management
- MN4110 (4-0) Multivariate Analysis

**Quarter 4**

- MN4145 (4-0) Policy Analysis
- MN3105 (4-0) Organization and Management
- IS3183 (4-0) Management Information Systems

**Quarter 5**

MN0810 (0-0) Thesis Research  
MN0810 (0-0) Thesis Research  
Curriculum Option  
NS3252 (4-0) Joint and Maritime Strategic Planning

**Quarter 6**

MN0810 (0-0) Thesis Research  
2 Curriculum Options  
MN4105 (4-0) Management Policy

**Note:** Typical Courses of Study vary depending of the Officer's Branch of Service (ie. Army, Coast Guard, Marine Corps, International Officer, DoD Civilian).

While Allied officers may freely choose any of the specific management curricula available, a more general Administrative Sciences International curriculum allows allied officers to design a program of course work that is specifically useful in their own country's military system.

## **Systems Inventory Management**

This curriculum emphasizes the management of Navy owned inventories at all levels. Students take courses in general inventory model development and the specific details of the Navy's inventory models, spanning the three levels of wholesale, intermediate and retail customer support. The curriculum emphasizes responsibilities for developing procedures for establishing, maintaining and controlling inventories of material, distributing that material to the Navy customer and developing the budgets for financing these inventories. The curriculum is sponsored by Naval Supply Systems Command Headquarters.

### **Typical Course of Study**

#### **Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
IS0123	(0-2)	Computer Skills Development

#### **Quarter 2**

MN3161	(4-0)	Managerial Accounting
MN3140	(4-0)	Microeconomic Theory
MN3105	(4-0)	Organization and Management
OS3104	(4-1)	Statistical for Science and Engineering

#### **Quarter 3**

MN3161	(4-0)	Inventory 1
MN3172	(4-0)	Public Policy Processes
MN3372	(4-0)	Material Logistics
OS3006	(4-0)	Operations Research for Management

#### **Quarter 4**

OS4501	(4-0)	Seminar in Supply Systems
MN4145	(4-0)	Policy Analysis
MN4310	(4-0)	Logistics Engineering
IS3183	(4-0)	Management Information Systems

#### **Quarter 5**

MN0810	(0-0)	Thesis Research
MN0810	(0-0)	Thesis Research
NS3252	(4-0)	Joint and Maritime Strategic Planning
MN3301	(4-0)	Systems Acquisition and Project Management

### **Quarter 6**

MN0810	(0-0)	Thesis Research
MN4105	(4-0)	Management Policy
MN4154	(4-0)	Financial Management in the Armed Forces
MN3371	(4-0)	Contracts Management and Administration

### **Material Logistics Support Management**

This curriculum emphasizes all of the aspects for providing integrated logistics support of weapons systems. Besides a study of the core disciplines, the curriculum delves into production management, inventory management, integrated logistic support, procurement and contract administration, systems acquisition and project management. Skills resulting from the curriculum will prepare those responsible for managing the various segments of a military system's life cycle from initial planning to fielding the system, through sustaining operations to phaseout. This curriculum is sponsored by Naval Air Systems Command Headquarters.

### **Typical Course of Study**

#### **Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
IS0123	(0-2)	Computer Skills Development

#### **Quarter 2**

MN3161	(4-0)	Managerial Accounting
MN3140	(4-0)	Microeconomic Theory
MN3105	(4-0)	Organization and Management
OS3104	(4-1)	Statistical for Science and Engineering or OS3101

#### **Quarter 3**

MN3372	(4-0)	Material Logistics
MN3172	(4-0)	Public Policy Processes
MN3301	(4-0)	Systems Acquisition and Project Management
OS3006	(4-0)	Operations Research for Management

#### **Quarter 4**

MN3371	(4-0)	Contracts Management and Administration
MN4145	(4-0)	Policy Analysis
MN4310	(4-0)	Logistics Engineering
IS3183	(4-0)	Management Information Systems

**Quarter 5**

MN0810	(0-0)	Thesis Research
MN0810	(0-0)	Thesis Research
MN3374	(4-0)	Production Management Curriculum Option

**Quarter 6**

MN0810	(0-0)	Thesis Research
MN4105	(4-0)	Management Policy
MN4154	(4-0)	Financial Management in the Armed Forces
NS3252	(4-0)	Joint and Maritime Strategic Planning

**Financial Management**

The objectives of this curriculum is to prepare officers for business and financial positions within the Navy. Financial Managers assist the Navy's decision-making processes at all levels by providing accurate, timely and relevant information. They are concerned with the optimal allocation of human, physical and financial resources to achieve the Navy's goals and objectives while assuring efficient and effective expenditure of public funds.

Students cover topics such as financial reporting standards, cost standards, cost analysis, budgeting, internal control, financial auditing, operational auditing, management planning and control systems, quantitative techniques used in planning and control, and the Planning Program and Budgeting System used within the DoD.

Graduates of this curriculum will be prepared for assignment to positions in budgeting, accounting, business and financial management, and Internal Control and Auditing. This curriculum is sponsored by OP-92, Fiscal Management Division.

**Typical Course of Study****Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
IS0123	(0-2)	Computer Skills Development

**Quarter 2**

MN3161	(4-0)	Managerial Accounting
MN3140	(4-0)	Microeconomic Theory
MN3105	(4-0)	Organization and Management
OS3101	(4-1)	Statistical Analysis for Management

**Quarter 3**

MN4161 (4-0) Financial Management Control Systems  
MN3172 (4-0) Public Policy Processes  
MN4162 (4-0) Cost Accounting  
OS3006 (4-0) Operations Research for Management

**Quarter 4**

MN4154 (4-0) Financial Management in the Armed Forces  
MN4145 (4-0) Policy Analysis  
MN4151 (4-0) Internal Control and Auditing  
IS3183 (4-0) Management Information Systems

**Quarter 5**

MN0810 (0-0) Thesis Research  
MN0810 (0-0) Thesis Research  
MN3374 (4-0) Production Management  
Curriculum Option

**Quarter 6**

MN3301 (4-0) Systems Acquisition and Project Management  
MN0810 (0-0) Thesis Research  
MN4105 (4-0) Management Policy  
NS3252 (4-0) Joint and Maritime Strategic Planning

## **Manpower/Personnel Training Analysis**

Officers enrolled in the MPTA curriculum at NPS undertake the challenge of an academic program designed to fill the leadership roles in military manpower management. This specialty has primary responsibility for developing and analyzing policies to ensure that the Navy is recruiting, training, utilizing and retaining personnel in the most efficient and effective ways possible. MPTA is an extremely analytical curriculum intended to develop skills necessary to perform and evaluate manpower analyses. As such, the curriculum emphasizes mathematical, statistical and other quantitative methods.

The areas covered in the MPTA curriculum include an understanding of MPT policy development, compensation systems, productivity analysis, enlistment supply and retention models, manpower training models, manpower requirements determination processes, career mix, enlistment incentives, training effectiveness measures and hardware/manpower trade-offs. Students gain familiarity with current models and methods of MPT analysis as well as military MPT organizations and issues. This curriculum is sponsored by OP-11, Total Force Training and Education Division.

### **Typical Course of Study**

#### **Quarter 1**

MN2150	(4-0)	Financial Accounting
MN2031	(4-0)	Economic Decision Making
MN3333	(4-0)	Managerial Communication Skills
MA2300	(5-0)	Mathematics for Management
MN2111	(0-2)	Seminar in MPTA Issues
IS0123	(0-2)	Computer Skills Development

#### **Quarter 2**

MN3161	(4-0)	Managerial Accounting
MN3140	(4-0)	Microeconomic Theory
MN3105	(4-0)	Organization and Management
OS3101	(4-1)	Statistical Analysis for Management
MN2112	(0-2)	Seminar in MPTA Issues
MN3902	(0-2)	Computer Skills Enhancement

#### **Quarter 3**

MN3761	(4-0)	Manpower Economics
MN3111	(4-0)	Personnel Processes
MN4162	(4-0)	Cost Accounting
OS3006	(4-0)	Operations Research for Management
MN4110	(5-2)	Multivariate Manpower Data Analysis 1
MN2113	(0-2)	Seminar in MPTA Issues

#### **Quarter 4**

MN4761	(4-0)	Applied Manpower Analysis
MN4500	(4-0)	Productivity Analysis
OS4701	(4-0)	Manpower and Personnel Models
MN4111	(5-2)	Multivariate Manpower Data Analysis 2

#### **Quarter 5**

MN0810	(0-0)	Thesis Research
MN0810	(0-0)	Thesis Research Curriculum Option
MN4106	(4-0)	Manpower Policy Analysis
NS3252	(4-0)	Joint and Maritime Strategic Planning

#### **Quarter 6**

MN0810	(0-0)	Thesis Research
MN3172	(4-0)	Public Policy Processes
IS3183	(4-0)	Management Information Systems
MN4105	(4-0)	Management Policy
MN4904	(0-2)	Advanced MPTA Research Applications

**B. Information Systems Master's Degree Program**  
(Extracted from Naval Postgraduate School Catalog 1991)

The next largest program, Information Systems Master's Program, is also a six-quarter curriculum and is interdisciplinary in nature. This curriculum is sponsored by (OP-945) Director, Information Systems Division and consists of two parts: A core program required of all students and a subspecialty option which is selected by the student from one of four approved options. While the core areas delineate the subdisciplines of Information Systems, the options accentuate the subspecialties. Thus, the courses which make up an option tend to cut across several core areas such as computer science, information systems, and management. At least three courses are required to make up an option. Unlike the subspecialty options of the Administrative Sciences program, these options are introductory in nature and only giving the student some emphasis in these areas. These options are:

- Decision Support Systems
- Tactical Systems
- Information Resource Management
- Computer Networks

Students in this program must successfully complete or validate core courses in each of the following disciplines:

- Accounting and financial management
- Organization sciences
- Information Systems
- Computer Science
- Economics
- Management theory and practice
- Quantitative methods

Each student's curricula must include the successful completion of 48 quarter hours of graduate level course work and an acceptable thesis or project. At least 12 quarter hours of the course work must be at the 4000 level. Further, this graduate-level course work must include at least 24 quarter hours in Administrative Sciences and at least 16 quarter hours in Computer Science. Each student's program must be approved by the Chairman of the Department of Administrative Sciences.

## **Computer Systems Management**

### **Typical Course of Study**

#### **Quarter 1**

- CS2970 (4-1) Structured Programming with ADA
- IS2000 (3-0) Introduction to Computer Management
- MN2155 (4-0) Accounting for Management
- MN3105 (4-0) Organization and Management

#### **Quarter 2**

- CS3010 (4-0) Computing Devices and Systems
- IS3020 (4-0) Software Design
- IS3170 (4-0) Economic Evaluation of Information Systems
- OS3101 (5-0) Statistical Analysis for Management

#### **Quarter 3**

- CS3030 (4-0) Operating Systems Structures
- IS4200 (4-0) Systems Analysis and Design
- IS4183 (4-0) Application of Database Management Systems
- OS3004 (5-0) Operations Research for Computer Systems Managers

#### **Quarter 4**

- IS3502 (4-0) Computer Networks: Wide Area/Local Area
- IS4185 (4-0) Decision Support Systems
- IS0810 (0-0) Thesis Research
- NS3252 (4-0) Joint and Maritime Strategic Planning  
Optional Elective

#### **Quarter 5**

- IS4300 (4-0) Software Engineering and Management
- MN4154 (4-0) Financial Management in the Armed Forces
- IS0810 (0-0) Thesis Research  
Optional Elective

#### **Quarter 6**

- IS4182 (4-0) Information Systems Management
- MN3307 (4-0) ADP Acquisition
- IS0810 (0-0) Thesis Research  
Optional Elective

### **C. Telecommunications Systems Management Master's Degree Program**

(Extracted from Naval Postgraduate School Catalog 1991)

The final program is Telecommunications Systems Management. This curriculum provides instruction to officers who will perform as communications managers of new communication systems applications or as communication officers on large commands and staffs, afloat and ashore, including the organization of the Joint Chief of Staff and the Defense Communications Agency. The curriculum has two sponsors: The Director of Naval Communications which supports the non-engineering program and the U.S. Coast Guard Headquarters which sponsors the engineering program. Each curriculum provides comprehensive study in management, with emphasis on the systems management field. Additionally, the curricula provides study in the technical field appropriate to decision making in advanced systems and program management. These technical courses within the non-engineering curriculum have been especially prepared for non-engineering types, whereas the engineering curriculum does offer engineering courses.

#### **Telecommunications Systems Management**

##### **Typical Course of Study**

##### **Quarter 1**

CS2970	(5-0)	Structure Programming with ADA
MN2155	(4-0)	Accounting for Management
MN3105	(4-0)	Organization and Management
MN3301	(4-0)	Systems Acquisition
CM0001	(0-2)	Seminar

##### **Quarter 2**

CS3050	(4-0)	Software Engineering
MA1248	(4-1)	Applied Mathematics
OS3104	(4-0)	Statistics
CM0001	(0-2)	Seminar

##### **Quarter 3**

OS3404	(3-0)	Man-Machine Interaction
EO2710	(3-2)	Signal and Systems I
CM3112	(4-0)	Naval Telecommunications Systems
OS3005	(4-0)	Operations Research for Communications Managers
CM0001	(0-2)	Seminar

Two Week Experience Tour

**Quarter 4**

MN4125	(4-0)	Managing Planned Change in Complex
EO2750	(3-2)	Signals and Systems II
IS3502	(4-0)	Computer Networks
CM3001	(4-0)	Economic Evaluation of Telecommunications
CM0001	(0-2)	Seminar

**Quarter 5**

CM0810	(0-0)	Thesis Research
EO3750	(4-1)	Communications Systems Analysis
CM4502	(4-0)	Telecommunications Networks
CM3002	(4-0)	Economic Evaluation of Telecommunications
CM0001	(0-2)	Seminar

**Quarter 6**

CM0810	(0-0)	Thesis Research
CM4925	(4-0)	Telecommunications Systems, Industry and Regulations
		Optional Elective
CM0001	(0-2)	Seminar

**Note:** The Coast Guard Option is more engineering in nature.

#### **IV. THE FACULTY OF THE DEPARTMENT OF ADMINISTRATIVE SCIENCES**

The Department of Administrative Sciences is the largest academic department on campus, both in terms of faculty and students. The department has fourteen full professors, twenty associate professors, nineteen assistant professors, seventeen adjunct professors, and nine military instructors. In addition, the department has been very successful over the last five years in attracting a number of distinguished scholars to fill the Grace Mary Hopper Chair in Computer Science.

The department's faculty has long been recognized for its dedication to outstanding teaching and research in areas vitally important to the U.S. Navy and the Department of Defense. The department leads the school in attracting reimbursable research funding.

Faculty members in the department serve as reviewers for NSF and its International Counterpart. They also serve as editors and referees for leading journals such as Management Science, Information Research Management, Operations Research, Transportation Science, The American Economic Review, Administrative Sciences Quarterly, The Accounting Review, and the Academy of Management Review and Journal.

The department has an active research relationship with other universities and research institutes, for instance, MIT, Carnegie-Mellon University, New York University, the University of Pennsylvania, the University of Michigan and AT&T Bell Labs. Many of our faculty have co-authored papers and books with faculty members and researchers at these major institutions.

The strength of our overall program is indicated in Table 1, giving the record of publications, number of years teaching, Master's thesis supervised, Ph.D. committee work for tenured and tenure track faculty.

In addition to an active research program, the faculty has considerable experience in teaching doctoral courses, serving as supervisors and members of dissertation committees, and as administrators and committee members of other Ph.D. programs. Appendix B of this proposal contains a summary of faculty contributions to Ph.D. programs.

PUBLICATIONS AND TEACHING RECORD FOR FULL TIME FACULTY

	Books	Book Chap/ Proceedings/ Journals	Technical Reports	Years taught	MS Advised	Ph. D. Committee/ Supervised
Whipple	4	9	23	23	127	3/0
Abdel-Hamid	1	20	0	5	17	2/0
Barrett	0	8	0	8	0	0/0
Bhargava	0	6	3	2	0	0/0
Boger	0	19	23	12	253	5/0
Brown	0	3	6	3	0	0/0
Bui	4	29	3	14	50	3/1
Carrick	0	2	2	22	51	0/0
Dolk	0	27	15	9	17	2/0
Doyle	0	1	0	9	0	0/0
Eitelberg	4	28	18	9	28	0/0
Elster	0	2	19	22	29	0/0
Euske	3	50	24	13	73	0/0
Evered	2	26	5	36	39	20/10
Fremgen	1	17	1	32	53	0/0
Frew	0	0	0	6	39	0/0
Haga	2	20	7	19	41	0/0
Harris	4	12	20	13	48	5/1
Henderson	1	26	8	11	20	3/0
Hocevar, S.P.	0	4	5	2	5	0/0
Horton	0	0	0	0	11	0/0
Jones C.R.	2	10	6	26	42	5/1
Jones L.	5	35	3	14	32	8/2
Kamel	0	16	3	4	15	0/0
Kang	0	17	6	8	7	0/0
Lamm	1	28	6	13	87	1/1
Liao	1	91	19	20	49	1/0
McCaffery	0	12	0	7	34	0/0
McCaffrey	0	2	1	3	14	0/0
McMasters	0	6	23	26	140	5/0
Mehay	2	32	12	18	30	5/2
Moore	1	5	2	9	38	0/0
Moses	0	22	12	15	23	0/0
Ramesh	0	7	2	2	5	0/0
Roberts B. J.	4	10	9	14	13	15/0
Roberts N.	2	24	9	9	30	1/1
San Miguel	3	25	1	19	25	7/7
Schneidewind	0	28	10	21	67	1/1
Sessions	0	0	0	28	0	0/0
Sengupta	0	0	0	3	0	0/0
Suchan	0	27	2	16	11	0/0
Suh	0	3	1	3	20	1/0
Thomas G. F.	0	12	1	15	4	0/0
Thomas G. W.	0	21	31	20	66	0/0
Thomas K.	1	42	4	23	5	15/4
Trietsch	0	8	7	8	34	0/0
Weitzman	5	23	31	31	9	-/6
Zviran	3	19	4	4	0	0/0
Zweig	0	1	3	3	1	0/0

## **V. REQUIREMENTS AND PROCEDURES FOR DOCTORAL STUDY**

The Department of Administrative Sciences at the Naval Postgraduate School will award the degree of Doctor of Philosophy in Administrative Sciences as a result of meritorious and scholarly achievement in a particular field of administrative sciences ( organization and management, integrated logistics and operations management, and information technology. This program includes course work, written and oral examinations, research, and a written dissertation. A candidate must exhibit scholarly application to the entire course of study, achieve a high level of scientific advancement, and establish an ability for original investigation leading to the advancement of fundamental knowledge.

### **ADMISSION PROCEDURE**

A student seeking to become a candidate for this program must present evidence of having obtained a bachelors degree or its equivalent, no particular subject required, and of having excelled in previous academic works. Applicants are asked to provide personal essays; letters of recommendation; and the Graduate Management Admission Test (GMAT) scores or the Graduate Record Examination Test (GRE). Non-native English students must demonstrate proficiency in English.

### **PROGRAM OF STUDY**

Each student's Doctoral Committee to guide the student in designing a program suitable for his/her special interests and background to alert them to opportunities both within the Department of Administrative Sciences and other departments at NPS; and to monitor the student's progress.

#### **Core Program**

The doctoral program is based on a core of courses designed to provide the student with the broad knowledge and analytic skills necessary for advanced coursework and dissertation research. The core program develops the basic tools of quantitative methods, economics, management and accounting. Students must also demonstrate competence in computer usage as evidenced by prior coursework [IS0123 Computer Skills Development (4-0) Course equivalent] or experience. In the absence of such work, a student will be required to take core M.S. courses.

The core courses are as follows:

1. Quantitative Methods: Two 4-unit courses (e.g. OS 3101 Statistics Analysis for Management and either OS3006 Operations Research for Management or OS3004 Operations Research for Computer Systems Management).
2. Economics: Two 4-unit courses (e.g. MN2031 Economics Decision Making and MN3140 Microeconomic Theory).
3. Organization and Management: Two 4-unit courses (e.g. MN3105 Organization and Management and either MN4105 Management Policy or MN4125 Managing Planned Change in Complex Organizations).
4. Accounting and Financial Management: Two 4-unit courses (e.g. MN2150 Financial Accounting and MN3161 Managerial Accounting).
5. Two 4-unit research courses will be required. The following courses will be developed as a standard option. However, the student, with the approval of his/her doctoral committee may authorize alternative research courses more suited to the student's research program area.

MN4901 RESEARCH THEORY AND METHODS I (4-0)

MN4902 RESEARCH THEORY AND METHODS II (4-0)

Students who have taken the equivalent of these courses may waive one or more of these core requirements by the Departmental Ph.D. Committee.

## THE DEPARTMENTAL PH.D. COMMITTEE

The Departmental Ph.D. Committee has complete responsibility for the entire doctoral program. It is their duty to make recommendations for admission decisions, administering the preliminary examination, and overseeing the written part of the qualifying examination. The Ph.D. Committee shall monitor the progress of each student to ensure the student is on track towards the degree. Furthermore, the Ph.D. Committee is responsible for providing general guidance on the student's research program to all doctoral students.

A candidate shall apply to the Departmental Ph.D. Committee and shall ensure that all transcripts of previous post-secondary education and letters of recommendation are sent to the Committee. The Committee shall then recommend action to the Chairman of the Department of Administrative Sciences, who will formally admit the student into the doctoral program.

## **THE STUDENT'S DOCTORAL COMMITTEE**

Upon recommendation by the Departmental Ph.D. Committee, a Doctoral Committee for the student will be nominated by the Chairman of the Department of Administrative Sciences and approved by the Academic Council as per Academic Council Policy Manual, Section 250. The Committee shall consist of at least five members from three departments. This Committee shall consist of at least three members of the Department of Administrative Sciences and two members from other departments (including a member from the department which will administer the student's minor field of study). At least four members will have earned the doctorate and the Committee may contain no more than two members who have not earned the doctorate. The Chairman of the Department of Administrative Sciences shall designate one of the Administrative Sciences members as Chairman of the Doctoral Committee.

At the time that the above Committee is submitted for approval, or at a subsequent time no later than when the student is advanced to candidacy for the doctorate, the Chairman of the Department of Administrative Sciences shall designate, for the approval of the Academic Council, the member of the Student's Doctoral Committee who shall serve as Dissertation Supervisor. In accordance with Academic Policy Manual, Section 255, the Chairman of the Administrative Sciences Department, shall certify that the Dissertation Supervisor has been selected.

## **MAJOR AND MINOR FIELDS OF STUDY**

Upon admission, a student must indicate a major field of study in economics, financial management, logistics, management or management information systems. The student will be encouraged to select the minor field early in the student's program to ensure the student has adequate time to complete the requirements of the minor field of study and to coordinate the student's research for his minor field of study with his research for his major field of study. The minor field of study which may be in a department other than the Department of Administrative Sciences, such as National Security Affairs, Operations Research; Computer Science; Command, Control and Communications; Electrical and Computer Engineering. The student's selection of a minor field of study must be approved by the Student's Doctoral Committee. The criteria for satisfying the minor requirements are established by the department which offers the minor program.

## THE QUALIFYING EXAMINATION

After the student has successfully completed all requirements for the minor field and has essentially completed the major field, the student shall be given a qualifying examination in [administrative sciences]. The qualifying examination will include two parts, a written part and a oral part.

The Departmental Ph.D. Committee will prepare and administer the written part of the examination. The examination will include an in-depth testing of the student's knowledge and understanding of the student's specific field of study and ability to conduct research. The examination will be at least six hours in length and given over a one to two day period. The results will be evaluated by the Department Ph.D. Committee. The Department Ph.D. Committee will recommend the student for either an oral examination, a re-examination of the written part within six months, or the termination of the student's program. The written part of the qualifying examination should be taken by the summer quarter of the student's third year.

The oral portion of the qualifying examination shall be an open examination conducted by the student's entire Doctoral Committee and will only be scheduled upon the student's successful completion of the written part. Additionally, the Academic Council and members of the Department of Administrative Sciences and the minor department will be invited. The oral examination shall be given as soon as possible, normally within one month after successful passage of the written part of the qualifying examination. The oral part of the qualifying examination must be successfully completed with four and a half years after the date of entry into the program.

The successful passage of both the oral portions of the qualifying examination requires the unanimous vote of the Student's Doctoral Committee. The results of the entire qualifying examination shall be reported to the Dean of Instruction within two weeks after the scheduled date of the oral examination. If the student does not successfully pass the qualifying examination on the first try, the student may petition his/her Doctoral Committee to take the examination a second time.

## DISSERTATION RESEARCH

The dissertation culminates the student's academic endeavors. Working closely with faculty members from his/her committee during all phases of preparation, the student is expected to present a dissertation of substantial magnitude. The dissertation should make a significant contribution to the advancement of knowledge in the chosen field of study. It should be of sufficient

originality and quality to merit publication, either in whole or in part, in a professional journal. It is the student's responsibility to identify a Dissertation Supervisor and begin research as soon as possible. The student's Dissertation Supervisor shall be a member, but not necessarily the chairman, of the student's Doctoral Committee.

## **ADVANCEMENT TO CANDIDACY**

The student's Doctoral Committee shall recommend that the Academic Council advance the student to candidacy after the completion of the following requirements:

- a. The student's Doctoral Committee is approved by the Academic Council.
- b. The student's Dissertation Supervisor is approved by the Academic Council.
- c. The requirements for the minor are successfully completed.
- d. The successful passage of the qualifying examination.
- e. The proposed dissertation subject is approved by the student's Doctoral Committee.

## **THE DISSERTATION DEFENSE**

The dissertation shall be defended at a final oral examination no sooner than six months after the advancement to candidacy and no earlier than one week after submission and acceptance of a draft of the student's dissertation by the student's Doctoral Committee. The Doctoral Committee shall schedule the final oral examination and invite members of the Academic Council, the Department of Administrative Sciences, and other interested members of the academic community to attend. While any interested faculty member may attend the examination and participate in the discussion, only those individuals who are members of the student's Doctoral Committee can vote on the dissertation. The examination will be conducted by the Chairman of the student's Doctoral Committee, and will consist of a presentation and defense of the dissertation. Successful passage of the examination requires a unanimous vote of the student's Doctoral Committee.

The results of the examination shall be reported to the Dean of Academic Administration not later than two weeks after the scheduled date of the examination. A student that fails the final oral examination may petition his/her Doctoral Committee for at most one re-examination.

## **TIME LIMIT**

The student must complete all degree requirements, including the writing and successful defense of the dissertation within five years after advancement to candidacy or six and a half years from the date of entry into the program.

## APPENDIX C

### APPROVED FIELDS OF STUDY

#### INFORMATION TECHNOLOGY

Information Technology (IT) broadly encompasses the design, use, and evaluation of information and communication systems supporting organizational functions and decision making. An information technology can be defined as a set of procedures that collects (or retrieves), processes, stores, and disseminates information to support decision making and control. Information systems are sociotechnical systems; they are composed of machines, devices, and "hard" physical technology. In addition, information technology requires substantial social, organizational, and intellectual investments to make them work properly. The study of information technology is multidisciplinary, and no single theory or perspective dominates the field. In general, the field can be divided into technical and behavioral approaches. The technical approach to information technology emphasizes mathematically based, normative models to study capabilities of these systems.

A growing part of the information technology field is concerned with behavioral problems of system utilization, implementation, and creative design that cannot be expressed with normative models. The behavioral approach does not ignore technology, indeed, information technology is often the stimulus for a behavioral problem or issue. But the focus is generally not technical solutions, but rather on the social, group, and organizational impacts and uses of systems, the political impacts and uses of information, individual response to system realities, and cognitive models of human reasoning.

The Ph.D. program in Information Technology prepares scholars who have a firm understanding of the technical and organizational aspects of computer-based systems supporting organizations and individuals, as well as the analytical and empirical skills with which to contribute to basic knowledge in the discipline.

(a) Faculty Members Active in Information Science

T.X. Bui  
T.K. Abdel-Hamid  
H.K. Bhargava  
D.R. Dolk  
J. Emery  
B.A. Frew  
W.J. Haga  
C.R. Jones  
M. Kamel  
R.L. Knight  
M.J. McCaffrey  
B. Ramesh  
L.R. Sahlman  
N.F. Schneidewind  
K. Sengupta  
M.W. Suh  
M. Zviran

(b) Recent Publications of the Faculty

T.K. Abdel-Hamid and S.E. Madnick, *Software Project Dynamics: An Integrated Approach*, New York, Prentice-Hall, 1991

T.K. Abdel-Hamid, "The Dynamics of Software Project Staffing: A System Dynamics Based Simulation Approach", In *Software State-of-the-Art: Selected Papers*, by T. DeMarco and T. Lister (eds), New York, Dorset House Publishing, 1990

T.K. Abdel-Hamid, "System Dynamics", In *Encyclopedia of Software Engineering*, by John Marciniak (ed), New York, John Wiley & Sons, forthcoming

T.K. Abdel-Hamid and F. Leidy, "An Expert-Simulator for Allocating the Quality Assurance Effort in Software Development", *Simulation*, April, 1991

T.K. Abdel-Hamid, "On the Utility of Historical Project Statistics for Cost & Schedule Estimation", *Journal of Systems & Software* , September, 1990

T.K. Abdel-Hamid and D.I. Madnick, "The Elusive Silver Lining: How we Fail to Learn from Failure in Software Development", *The Sloan Management Review*, Fall, 1990

T.K. Abdel-Hamid, "Investigating the Cost-Schedule Trade-off in Software Development", *IEEE Software*, January, 1990

T.K. Abdel-Hamid and S.E. Madnick, "Lessons Learned from Modeling the Dynamics of Software Project Management", *Communications of the ACM*, December, 1989

T.K. Abdel-Hamid, "A Study of Staff Turnover, Acquisition, and Assimilation and their Impact on Software Development Cost and Schedule", *Journal of Management Information Systems*, September, 1989

T.K. Abdel-Hamid and S.E. Madnick, "Software Productivity: Potential, Actual, and Perceived", *System Dynamics Review*, Summer, 1989

T.K. Abdel-Hamid, "The Dynamics of Software Project Staffing: A System Dynamics Based Simulation Approach", *IEEE Transactions on Software Engineering*, February, 1989

T.K. Abdel-Hamid, "The Economics of Software Quality Assurance: A Simulation-Based Case Study", *MIS Quarterly*, September, 1988

T.K. Abdel-Hamid, "Understanding the '90% Syndrome' in Software Project Management: A Simulation-Based Case Study", *Journal of Systems & Software*, September, 1988

T.K. Abdel-Hamid and S.E. Madnick, "On the Portability of Quantitative Software Estimation Models", *Information & Management*, August, 1987

T.K. Abdel-Hamid and S.E. Madnick, "The Economics of Software Quality Assurance: A System Dynamics-Based Simulation Approach", *The Annals of the Society of Logistics Engineers*, October, 1987

T.K. Abdel-Hamid and S.E. Madnick, "Impact of Schedule Estimation on Software Project Behavior", *IEEE Software*, Vol. 3, No. 4, July, 1986

T.K. Abdel-Hamid and S.E. Madnick, "The Dynamics of Software Project Scheduling", *Communications of the ACM*, Vol. 26, No. 6, June 1991

H.K. Bhargava, S.O. Kimbrough, and R. Krishnan, "Unique Names Violations: A Problem for Model Integration or You Say Tomato, I Say Tomahto," forthcoming, *ORSA Journal on Computing*, 1991., Vol. 3, No. 2, pp 107-120

H.K. Bhargava, S.O. Kimbrough, C. Pritchett, and M. Bieber, "An Overview of the U.S. Coast Guard's KSS Project: DSS Concepts and Technology," forthcoming, *Interfaces*, 1990. (An earlier version appears in *Transactions of DSS-90*, May 1990, Vol. 20, No. 6, pp 5-16)

H.K. Bhargava and S.O. Kimbrough, "Model Management: An Embedded Language Approach," forthcoming, *Decision Support Systems*, 1992

H.K. Bhargava and R. Krishnan, "A Formal Approach for Model Formulation in a Model Management System," *Proceedings of the Twenty-Third Hawaii International Conference on System Sciences*, Kona, 1990, Vol. 3.

H.K. Bhargava, "Dimensional Analysis in Mathematical Modeling Systems: A Simple Numerical Method", Technical Report NPS-AS-91-010, Naval Postgraduate School, Monterey, CA 93943, February, 1991

H.K. Bhargava, and R.M. Beyer, "Automated Detection of Naming Conflicts in Schema Integration: Experiments with Quiddities\*", Technical Report NPS-AS-91-011, Naval Postgraduate School, Monterey, CA 93943, May, 1991

H.K. Bhargava, M. Bieger, and S.O. Kimbrough, "Oona, Max, and the WYWWYWI Principle: Generalized hypertext and model management in a symbolic programming environment," *Proceedings of the Ninth International Conference on Information Systems*, Minneapolis, 1988.

H.K. Bhargava, "A Simple and Fast Numerical Method for Dimensional Arithmetic," Department of Administrative Sciences Working Paper No. 90-01, Naval Postgraduate School, March 1990.

H.K. Bhargava, S.O. Kimbrough, and C.W. Pritchett, "A Balance Sheet Approach to Fleet Mix Planning," working Paper No. 90-01-06, Dept. of Decision Sciences, The Wharton School, revised, April 1990.

H.K. Bhargava and M. Guignard-Spielberg, "The General Procurement Problem: A Comparison of Lagrangean Decomposition with other Relaxation Bounds," Working Paper No. 88-11-02, Dept. of Decision Sciences, The Wharton School, November 1988.

T.X. Bui, "Executive Planning with BASIC", *Sybex*, Berkeley, 197 pages, 1982.

T.X. Bui and Klein, "Planen und Entscheiden mit dem Sharp PC-1500", *Sybex*, Duesseldorf, 214 pages, 1984.

T.X. Bui, Pasquier, Giovannini, Girod, and Wuillemin, "Essais d'optimisation dimensionnelle et structurelle de l'entreprise", Settler-Diss, Fribourg, Switzerland, Un De bat sur le Futur, Fribourg University Press, 181 pages, 1979.

T.X. Bui, "Co-oP, A Group Decision Support System for Cooperative Group, Decision Making", *Lecture Notes in Computer Sciences*, Springer Verlag, New York, 1987, 250 pages (edited by G. Goos and J. Hartmanis).

T.X. Bui, as guest Co-Editor, "Special Issue in Group and Negotiation Support Systems", *European Journal of Operations Research*, forthcoming, January 1990.

T.X. Bui and Sivasankaran, "Cost-Effectiveness Modeling for a Decision Support System in Computer Security", Book Chapter, in Turn, *Advances in Computer System Security*, Artec House, Inc., Norwood, MA, Vol. 3, 1988, pp. 63-75.

T.X. Bui, Jarke and Jelassi, "Micro-Mainframe Link in Group Decision Support Systems", Book Chapter, in Jarke, *Managers, Micros and Mainframes*, John Wiley and Sons, 1986, Chapter 14, pp. 205-218.

T.X. Bui, "Non-Cooperation in GDSS: Problems and Solutions", to appear in *SCIMA Journal of Management Science and Cybernetics*, Fall 1989.

T.X. Bui, "The Negotiable Alternative Identifier (NAI): A Solution Concept for Group Decision and Negotiation Support Systems", to appear in *SCIMA Journal of Management Science and Cybernetics*, Summer 1989.

T.X. Bui, "La qualite de la decision en temps de crise", *Swiss Journal of Management* (Die Unternehmens), To appear October 1989.

T.X. Bui, "Un syst strategiques de l'entreprise", *Swiss Journal of Political Economy* (Schweiz. Zeitschrift fuer Volkswirtschaft und Statistik, Vol. III, 1988.

T.X. Bui, LtCol Lee, Major Foster, LtCdr Fonnesbeck, and Lt Moore, "Cost Estimation of System and Evaluation of DOD Aircraft: Drivers and Parametric Equations", *International Journal of Parametrics*, Vol. VII, No. 1, March 1988.

T.X. Bui and Sivasankaran, "Cost-Effectiveness Modeling for a Decision Support System in Computer Security", *Computers and Security*, Vol. 5, No. 4, 1987.

Sivasankaran and Jelassi, "Prise de Decision dans l'organisation: Quand les SIAD peuventils aider?", *Interfaces*, Paris, March 1987.

T.X. Bui and Jarke, "Communications Design of Co-oP: A Group Decision Support Systems", *ACM Transactions on Office Information Systems*, Vol. 4, No. 2, April 1986.

T.X. Bui and Jarke, "Communications Requirements for Group Decision Support Systems", *Journal of Management Information Systems*, Vol. 2, No. 4, Spring 1986 (also printed in the Proceedings of the 1986 Hawaii International Conference on System Sciences, Honolulu, January 1986).

T.X. Bui, "Building Effective Multiple Criteria Decision Models: A Decision Support System Approach", *Systems, Objectives, Solutions*, Vol. 4, 1984.

T.X. Bui, "Social Accounting in Switzerland: A Nation-wide Survey", *The Swiss CPA Journal*, December 1980, pp. 6-11.

T.X. Bui and Sivasankaran, "Fuzzy Preferences in Bilateral Negotiation Support Systems"  
accepted for publication, *Proceedings of the 24th Hawaii International Conference on System Sciences (HICSS)*, January 1991.

T.X. Bui, and Sivasankaran, "Relation Between GDSS Use and Group Task Complexity: An Experimental Study", *Proceedings of the 23th Hawaii International Conference on System Sciences (HICSS)*, January 1990.

T.X. Bui, "An Intelligent Front-End for MCDM-Based Decision Support Systems", *Proceedings of the VIII-th International Conference on Multiple Criteria Decision Making*, Manchester, U.K., August 21-26, 1988.

T.X. Bui and Sivasankaran, "Identifying Organizational Opportunities for GDSS Use: Some Experimental Evidence", *Decision Support Systems* (ed. Omar A. El Sawy), San Francisco, 1987.

T.X. Bui, "Coupling Expert Systems with Database Management Systems in a Computer-aided Air Defense Instructional Environment", *Proceedings of the 1987 Conference on Technology in Training and Education*, March 1987, Colorado Springs, Colorado, pp. 466-481.

T.X. Bui, "Organizational Decision Making: When Can DSS Help?", *Proceedings of the International Colloquium on the Development of Sciences for Organizations*, French Association for Cybernetics and Economics (AFCET), Paris, March 10-12, 1987.

T.X. Bui, and Sivasankaran, "Integrating Modular Design with Adaptive Design in DSS Prototyping: An Archipelagian Approach", *Proceedings of the 20th Hawaii International Conference on System Sciences (HICSS)*, January 6-9, 1987, Kailua-Kona.

T.X. Bui, Suchan and Dolk, "GDSS Effectiveness: Identifying Organizational Opportunities", *Proceedings of 20th HICSS*, January 6-9, 1987, Kailua-Kona.

T.X. Bui and Sivasankaran, "Rule-based Bayesian Architecture for Monitoring Learning Process in Intelligent Computer Aided Training Systems", *Proceedings of the 1986 IEEE International Conference on Systems, Man, Cybernetics*, October 1986, pp. 932-936.

T.X. Bui and Sivasankaran, "A Bayesian Diagnostic Model for Intelligent CAI Systems", *Proceedings of the 1985 IEEE International Conference on Systems, Man, Cybernetics*, October 1985, Atlanta, Georgia.

T.X. Bui, "A Consensus Seeking Algorithm for Group Decision Support Systems", *Proceedings of the 1985 IEEE International Conference of Systems, Man, Cybernetics*, November 1985, Tucson, Arizona.

T.X. Bui and Jarke, "A Decision Support System for Cooperative Multiple Criteria Group Decision Making", *Proceedings of the 5th International Conference on Information Systems (ICIS)*, November 1984, Tucson, Arizona.

T.X. Bui, "An Architecture for Distributed Knowledge-based GDSS", *Proceedings of the IFORS-90*, June 1990, Athens, Greece.

T.X. Bui, "Multiple Criteria Decision Support Systems: Matching Methods to Domain Applications", *Proceedings of the IFORS-90*, June 1990, Athens, Greece.

D.R. Dolk and J.E. Kottemann, "Model integration and modeling languages," forthcoming in *Information Systems Research*.

D.R. Dolk and D.J. Kridel, "Modeling telecommunications demand analysis," forthcoming in *Interfaces*.

D.R. Dolk and D.J. Kridel, "An active modeling system for econometric analysis," forthcoming in *Decision Support Systems*.

D.R. Dolk and K.J. Euske, "Control strategies for GDSS: An end-user model," *European Journal of Operations Research*, 1990.

D.R. Dolk, "Model management and structured modeling: The role of an information resource dictionary system," *Communications of the ACM*, Vol. 36, No. 6, June 1988, pp. 704-718.

D.R. Dolk and R.A. Kirsch, "A relational information resource dictionary system," *Communications of the ACM*, Vol. 30, No. 1, January 1987, pp. 48-61.

D.R. Dolk, "A generalization model management system for mathematical programming," *ACM Transactions on Mathematical Software*, Vol. 12, No. 2, June 1986, pp. 92-126.

D.R. Dolk, "Data as models: An approach to implementing model management," *Decision Support Systems*, Vol. 2, 1989, pp. 73-80.

D.R. Dolk and B.R. Konsynski, "Model management in organizations," *Information and Management*, Vol. 9, No. 1, August 1985, pp. 35-47

D.R. Dolk and B.R. Konsynski, "Knowledge representation for model management systems," *IEEE Transactions on Software Engineering*, SE-10, No. 6, November 1984, pp. 619-627. Reprinted in *System Design for Human Interaction*, Andrew Sage, ed. IEEE Press, New York, 1987, pp. 367-376.

D.R. Dolk, D.G. Castillo and D.J. Kridel, "GOST: An active modeling system for costing and planning NASA space programs", forthcoming in *Journal of Management Information Systems*

D.R. Dolk and J.E. Kottemann, "Model integration and modeling languages", forthcoming in *Information Systems Research*

D.R. Dolk and J.E. Kottemann, "Model integration and theory of models", *Model Management*, R.W. Blanning and A.B. Whinston, eds., IEEE Computer Society Press, to appear in 1992

D.R. Dolk and D.J. Kridel, "An active modeling system for econometric analysis", *Advances in Model Management*, D. King and R.W. Blanning, eds., PRIISM, to appear in 1992, (reprint of DSS article

D.R. Dolk and B. Konsynski, "Knowledge abstractions in model management", *Readings in Decision Support and Executive Information Systems*, P. Gray, ed., Prentice-Hall, to appear in 1991, reprint of DSS-82 Conference Proceedings article

D.R. Dolk, "Relational database management systems and model management: A tutorial", *Mathematical Models for Decision Support*, G. Mitra, ed., NATO ASI Series, Springer-Verlag, 1988, pp. 323-346

D.R. Dolk, "Model management systems for operations research: A prospectus", *Mathematical Models for Decision Support*, G. Mitra, ed., NATO ASI Series, Springer-Verlag, 1988, pp. 347-374

D.R. Dolk and B.R. Konsynski, "Knowledge representation for model management", *System Design for Human Interaction*, A. Sage, ed., IEEE Press, New York, 1987, pp. 367-376

D.R. Dolk, D.G. Castillo and D.J. Kridel, "GOST: An active modeling system for costing and planning NASA space programs", *Proceedings of the 24th Hawaii International Conference on System Sciences*, Vol. III, IEEE Computer Society Press, January, 1991

D.R. Dolk and D.J. Kridel, "Towards an artificially intelligent econometrician", *Proceedings of the 22nd Hawaii International Conference on System Sciences*, Vol. III, IEEE Computer Society Press, January, 1989, pp. 3-13

D.R. Dolk and J.E. Kottemann, "Process-oriented model integration", *Proceedings of the 21st Hawaii International Conference on System Sciences*, Vol. III, IEEE Computer Society Press, January, 1988, pp. 396-403

D.R. Dolk, J. Suchan and T.X. Bui, "GDSS effectiveness: identifying organizational opportunities", *Proceedings of the 20th Hawaii International Conference on System Sciences*, Vol. III, IEEE Computer Society Press, January, 1987, pp. 441-449

D.R. Dolk and A.F. Noel, "A relational dictionary prototype for implementing model management", *Proceedings of the 19th Hawaii International Conference on System Sciences*, IEEE Computer Society Press, January, 1986, pp. 405-415

D.R. Dolk, "Data as models: An approach to implementing model management", Invited paper presented at the Model Management Workshop, Austin, TX, May 15-17, 1985 (also appeared in a special issue of *Decision Support Systems*)

D.R. Dolk and B.R. Konsynski, "Knowledge abstractions in model management", *Proceedings of DDS-82*, June, 1982, pp. 187-202

D.R. Dolk, "a model management system for combat simulation. Technical Report NPS-54-86-014, Naval Postgraduate School, Monterey, CA, 93943, November, 1986

D.R. Dolk, "Information resource management in the DCSPLANS branch of the U.S. Army Military Personnel Center", Technical Report NPS-54-86-016, Naval Postgraduate School, Monterey, CA 93943, November, 1986

D.R. Dolk and N.F. Schneidewind, "A distributed operating system design and dictionary/directory for the SPLICE", Technical Report NPS-54-83-014, November, 1983

D.R. Dolk, "A knowledge-based system for LP modeling", Technical Report NPS-54-83-012, September, 1983

W.M. Garrabrants, A.W. Ellis, L.J. Hoffman and M.N.Kamel, "CERTS: A Comparative Evaluation Method for Risk Management Methodologies and Tools", *Proceedings of the Sixth Annual Computer Security Applications Conference*, Tucson, AZ, December 1990.

W.M. Garrabrants, A.W. Ellis, L.J. Hoffman and M.N.Kamel, "CERTS: A Comparative Evaluation Method for Risk Management Methodologies and Tools", Technical Report NPS-54-90-013, Naval Postgraduate School, Monterey, CA 93943, June 1990.

R. Giladi, M. Zviran, "The Impact of Improvements in Hardware Technology On Information Systems Distribution Patterns", *Proceedings of the Twenty-fifth Annual Conference on Data Processing*, Jerusalem, Israel, October, 1990, pp. 63-77.

W.J. Haga, M. Zviran, "Password Security: An Exploratory Study", Technical Report NPS-54-90-011, Naval Postgraduate School, Monterey, CA 93943, May 1990.

W.J. Haga, M. Zviran, "Comparison of Password Techniques", *Proceedings of COMPSEC-90 International*, London, October 1990.

W.J. Haga, M. Zviran, "User Authentication by Cognitive Passwords: An Empirical Assessment", *Proceedings of the Fifth Jerusalem Conference on Information Technology*, Jerusalem, October 1990.

W.J. Haga and K.J. Euske and J. Hardesty, "Fort Saxon's work processing system proposal", In C. Larence, ed.: *Cases in public budgeting and financial management*, Prentice-Hall, 1982.

W.J. Haga, "Security violation reporting and databases in DoD", Technical Report PERS-TR-88-X, December, 1988

W.J. Haga and N. Acocella, "Haga's Law: Why nothing works and no one can fix it and the more we try the worse it gets", New York, Wm. Morrow, 1980, 191 p.

J.E. Hall, D.K. Hsiao, M.N. Kamel, "The Multibackend Database System (MDBS): A Performance Study", *Proceedings of the International Conference on Databases, Parallel Architectures, and their Applications*, Miami Beach, FL, March 1990, pp. 139-143.

D.R. Henderson, W.J. Haga, "How to Account for Inflation When Taking Present Values", Technical Report NPS-54-90-020, Naval Postgraduate School, Monterey, CA 93943, September 1990.

D.K. Hsiao, M.N. Kamel, "The Federated Databases and System: A New Generation of Advanced Database Systems", *Proceedings of the International Conference on Database and Expert Systems Applications*, DEXA 90, Vienna, Austria, August 1990, pp. 186-190.

C.R. Jones, C.G. Cooper and P.S. Fischbech, "Message screening board automation: A knowledge engineered approach", DSS-86Trans., Inst. of Management Sciences, 1986, pp. 261-270

M.N. Kamel, R.W. Lekey, "ACMS: A Prototype Expert Database System for Air Combat Maneuvering", Technical Report NPS-54-90-002, Naval Postgraduate School, Monterey, CA 93943, March 1990.

M.N. Kamel, R.W. Lekey, "1990 Naval Avionics Center Scientist and Engineer Profile", Technical Report NPS-54-90-010, Naval Postgraduate School, Monterey, CA 93943, July 1990.

M.N. Kamel, "Interoperability and Integration Issues in Heterogeneous Database Environments", *Proceedings of the Seventh Annual Database Colloquium, Database '90*, San Diego, CA, June 1990.

M.N. Kamel, "The Federated Database Management System: An Architecture of Distributed Systems for the 90's", *Proceedings of the Second IEEE Workshop on Future Trends of Distributed Computing Systems*, Cairo, Egypt, September 1990, pp. 346-352.

M.N. Kamel, Lekey, R.W., "ACMS: A Prototype Expert Database System for Air Combat Maneuvering", *Proceedings of the International Conference on Information Management*, San Bernardino, CA, May, 1990.

M.N. Kamel, S.B. Davidson, "Redundancy: An Approach to the Efficient Implementation of Semantic Integrity Assertions", *Proceedings of the Twenty-Third Annual Hawaii International Conference on System Sciences*, Kailua-Kona, HI, January 1990, pp. 393-399.

N.F. Schneidewind, "Software Maintenance: The Need for Standardization", *Proceedings of the IEEE*, Vol.77, No. 4, April 1989, pp. 618-624. (Also translated into Russian and published in the Soviet edition of this Proceedings of the IEEE).

N.F. Schneidewind, "Distributed System Software Design Paradigm with Application to Computer Networks", *IEEE Transactions on Software Engineering*, Vol. 15, No. 4, April 1989, pp. 402-412.

N.F. Schneidewind, "The State of Software Maintenance", *IEEE Transactions on Software Engineering*, Vol. SE-13, No. 3, March 1987, pp. 303-310. (Also translated into German and published in Online, March 3, 1988, pp. 51-56).

N.F. Schneidewind, "Interconnecting Local Networks to Long-Distance Networks", *IEEE Computer*, Vol. 16, No. 9, September 1983, pp. 15-24.

N.F. Schneidewind, "Application of Program Graphs and Complexity Analysis to Software Development and Testing", *IEEE Transactions on Reliability*, vol.R-28, no. 3, August 1979, pp. 192-198.

N.F. Schneidewind and Heinz-Michael Hoffmann, "An Experiment in Software Error Data Collection and Analysis", *IEEE Transactions on Software Engineering*, vol. Se-5, no. 3, May 1979, pp.276-286.

N.F. Schneidewind, "The Use of Simulation in the Evaluation of Software", *IEEE Computer*, April 1977, pp. 47-53.

N.F. Schneidewind, "Interconnecting Local to Long-Distance Networks", *Tutorial, Local Network Technology*, Third Edition, William Stallings, Editor, IEEE Computer Society Press, 1988, pp.404-413 (reprint from IEEE Computer, September 1983).

N.F. Schneidewind, The Use of Simulation in the Evaluation of Software (Originally appeared in IEEE Computer, April 1977, pp.47-53) *Selected Reprints in Software*, IEEE Computer Society Press Third Edition 1987 Pages 387-393  
Schneidewind, Norman F., "Principles of Local Area Networks", *Encyclopedia of Science and Technology*, McGraw-Hill Book Co., 1986.

N.F. Schneidewind, "Principles of Wide Area Networks", *Encyclopedia of Science and Technology*, McGraw-Hill Book Co., 1986.

N.F. Schneidewind, "Principles of Teleprocessing", *Encyclopedia of Science and Technology*, 1986.

N.F. Schneidewind, "Local Area Networks", *Yearbook of Science and Technology* (1986), McGraw-Hill Book Co., 1985, pp.259-262.

N.F. Schneidewind, "The Applicability of Hardware Reliability Principles for Computer Software", *Software Quality Management*, John D. Cooper and Matthew J. Fisher (eds.), Petrocelli Books, Inc., 1979, pp.171-181.

N.F. Schneidewind, "Validating Software Metrics", Technical Report, Naval Postgraduate School, NPS-AS-90-019, September 1990.

N.F. Schneidewind, Editor, "IEEE standard for a Software Quality Metrics Methodology" (Draft), P1061/D22, June 1991.

N.F. Schneidewind, "How a standardized Change Management Methodology Can Improve Software Maintenance", NPS Technical Report, NPS AS-89-09, May 1989.

N.F. Schneidewind, "Software Maintenance: The Need for Standardization", NPS Technical Report NPS-54-89-02, February 1989.

N.F. Schneidewind, Proposed Technology and procurement Policy for SNAP III Technical Report, Naval Postgraduate School. NPS-54-86-012, October, 1986, 23 pages.

N.F. Schneidewind, D.R. Dolk, A Distributed Operating System Design or the Stock Point Logistics Integrated Communications Environment., Technical Report, NPS-54-83-015, Naval postgraduate school, November 1983, 81 pages.

N.F. Schneidewind, Functional Design of a Local Area Network for the Stock Point Logistics Integrated Communications Environment, Technical Report, NPS-54-82-003, Naval postgraduate School, December 1982, 64 pages.

N.F. Schneidewind, "Report on the Standard for a Software Quality Metrics (Draft) P1061, with Discussion of Metrics Validation", *Proceedings of the Fourth Software Engineering standards Application Workshop*, May 22, 1991, pp. 155-157.

N.F. Schneidewind, "Validating Software Metrics: Producing Quality Discriminators", *Proceedings of the International Symposium on Software Reliability Engineering*, Austin, TX, May 18, 1991, pp. 225-232.

N.F. Schneidewind, "Issues in Allocating Servers and Files in a Local Area Network", *Proceedings of the silicon valley Networking Conference*, Santa Clara, CA, April 25, 1991, pp. 449-458.

N.F. Schneidewind, "The Effects of High Speed Networking on the Operation of a Distributed System Software Design Paradigm", *Proceedings of Future Trends '90*, Second IEEE Workshop on Future Trends of Distributed Computing Systems, September 30-October 2, 1990, Cairo, Egypt, pp. 161-164.

N.F. Schneidewind, "Special Issues In Local Area Network Software/Hardware Configuration Management and Maintenance, *Conference Proceedings, Networks Track, Systems Design and Network Conference*, IEEE, Santa Clara, CA, May 8-10, 1990, pp. 46-59.

N.F. Schneidewind, "Distributed System Software Design Paradigm with Application to Computer Networks", *IEEE Global Telecommunications conference*, Conference Record, Vol. 3 of 3, December 4, 1986, Houston, TX, pp. 1468-1474.

N.F. Schneidewind, "The IEEE Software Quality Metrics Draft Standard: Relationship With systems Commonality", *Proceedings of the NASA Workshop on Commonality in Computing for NASA Flight systems*, Lyndon B. Johnson Space Center, Houston, TX, October 28, 1986.

Singh, Raghu and N.F. Schneidewind, "Concept of a Software Quality Metrics Standard", *The 31 st IEEE Computer Society International Conference*, March 3-6, 1986, San Francisco, CA, Digest of Papers, IEEE Computer Society, 1986, pp. 362-368.

N.F. Schneidewind, "Distributed System software Design Paradigm with Application to Computer Networks", *Proceedings, Pacific Computer Communications Symposium, Korea Advanced Institute of Science and Technology*, Seoul, Republic of Korea, 21-25 Oct., 1985, pp. 80-89.

N.F. Schneidewind, "Interface Considerations in Computer Networks", *IEEE Wescon/84 Electronic Show and Convention*, Anaheim, CA, November 1, 1984, Professional Program Session Record 25, Electronic Conventions, Inc., 1984, 4 pages.

N.F. Schneidewind, "A Complexity Metric which Integrates Structural and Textual Metrics", 1983 Conference Proceedings, *Second Annual Phoenix Conference*, March 14-16, 1983, Phoenix, Arizona, IEEE Computer Society Press, pp. 95-99.

N.F. Schneidewind, "Functional Approach to the Design of a Local Network: Naval Logistics System Example", *Twenty-Sixth IEEE Computer Society International Conference*, San Francisco, CA, March 1983, Digest of Papers, IEEE Computer Society Press, 1983, pp. 197-202.

N.F. Schneidewind, "Usability of Military standards for the Maintenance of Embedded Computer Software", *Symposium on Software for Avionics*, Advisory Group for Aerospace Research and Development, North Atlantic Treaty Organization, The Hague, Netherlands, 6-10 September, 1982, pp. 21-1 to 21-6.

N.F. Schneidewind, "Software Error Process Simulation", *Record of the Working Conference on Advanced Electrotechnology Applications to Nuclear Power Plants*, IEEE and Nuclear Regulatory Commission, 1980, pp. 414-423.

T. F. Green, N. F. Schneidewind, et al., "Program Structures, Complexity and Error Characteristics", *Proceedings of the Symposium on Computer Software Engineering*, Polytechnic Press of the Polytechnic Institute of New York, April 1976, pp. 139-154.

N.F. Schneidewind, "Analysis of Error Processes in Computer Software", *Proceedings of the International Conference on Reliable Software*, IEEE, 21-23 April 1975, pp. 337-346.

Suh, M.W., R. Dulek, "A Reassessment of Clarity in Written Managerial

Communications", *Management Communication Quarterly*, Vol. 4, No. 1, August 1990, 87-99.

Suh, M.W., "Allocation of Data and Data Processing Resources in Distributed Database Systems: A Survey of Models and Algorithms", Naval Postgraduate School, Technical Report NPS-54-90-012, January 1990.

M. Zviran, "Applying Analytical Hierarchies to Computer-Family Selection Procedure", Naval Postgraduate School, Technical Report NPS-54-90-008.

M. Zviran, "Password Security", Naval Postgraduate School, Technical Report NPS-54-90-011

M. Zviran, W.J. Haga, "A Comparison of Password Techniques for Multilevel Authentication Mechanisms", Naval Postgraduate School, Technical Report NPS-54-90-014, May 1990.

M. Zviran, N. Ahituv and S. Neumann, "Information systems planning in Israel", *Proceedings of the 23rd Annual Conference on Data Processing*, IPA, Tel Aviv, Oct., 1988, pp. 151-165

M. Zviran and R. Giladi, "Trends in computer technology and their effect on organizational information systems", *MACHSHEVIM Proceedings of the 2nd Annual Conference for MIS*, Tel Aviv, August, 1988, pp. 23-26

M. Zviran, W.J. Haga, "Cognitive Passwords: The Key to Easy Access Control", *Computers and Security*, Vol. 9, pp. 723-736, December, 1990.

M. Zviran, "Defining the Application Portfolio for an Integrated Hospital Information System: A Tutorial", *Journal of Medical Systems*, Vol. 14, No. 1/2, April 1990, pp. 31-41.

M. Zviran, "Relationship Between Organizational and IS Objectives: Some Empirical Evidence", *Journal of Management Information Systems*, Vol. 7, No. 1, Summer 1990, pp. 65-84.

M. Zviran, "Design Considerations for Integrated Hospital Information System", *Hospital & Health Services Administration*, Vol. 35, No. 7, Fall 1990, pp. 377-393.

M. Zviran, J. Haga, V. Micucci, "SPAN - A DSS for Security Plan Analysis", *Computers & Security*, Vol. 9, No. 2, April 1990, pp. 153-160.

M. Zviran, W.J. Haga, "Password Security: An Exploratory Study", *Communications of the ACM*

M. Zviran, W.J. Haga, "User Authentication by Cognitive Passwords: An Empirical Assessment (JCIT-5)", *Proceedings of the 5th Jerusalem Conference on Information Technology*, Jerusalem, Israel, pp. 137-144, October 1990.

M. Zviran, "Organizational and IS Objective: An Exploratory Study", *Proceedings of DSI-90*, San Diego, November 1990.

(c) Ph.D. Dissertations Supervised by MIS Faculty Members

Alaa Eldin M. Fahmy, "Horizontal Estimation and Information Fusion in Multi-target and Multi-sensor Environments", Ph.D. Electrical and Computer Engineering, September 1987, Hal Titus, Dissertation advised by Schneidewind N.F.

Robert A. Steigerwald, "Reusable Software Component Retrieval Via Normalized Algebraic Specifications", Ph.D. Computer Science, December 1991, advised by Abdel-Hamid, T.K.

(d) Recent M.S. Theses Supervised by the MIS Faculty

Haury, C., "Desing and Development of a User Interface for the Dynamic Model of Software Project Management.", M.S. Information Sciences, March 1988, Advised by T.K. Abdel-Hamid

Gashler, P., "Impacts of End-User Computing on the Structure of Contemporary Administrative Organizations.", M.S. Information Sciences, June 1988, Advised by T.K. Abdel-Hamid

Buyske, J. and Call S., "A Microcomputer Based Employee Scheduling System for the Palo Alto Veterans Administration Medical Center.", M.S. Information Sciences, September 1988, Advised by T.K. Abdel-Hamid

Bower, T. and Burnette, J. , "A Project Management System for the Space Systems Academic Group.", M.S. Information Sciences, March 1989, Advised by T.K. Abdel-Hamid

Tulenko, E., "The Design and Development of a Gaming Interface for the System Dynamics Model of Software Project Management.", M.S. Information Sciences, March 1989, Advised by Abdel-Hamid T.K.

Swindell, D. , "Design and Development of a User Interface and User Manual for a System Dynamics Model of Software Management " , M.S. Information Sciences, March 1989, Advised by T.K. Abdel-Hamid

Leidy, F. , "Design and Development of an Expert Systems Based Quality Assurance Module for the System Dynamics Model of Software Management.", M.S. Information Sciences, March 1989, Advised by T.K. Abdel-Hamid

Feiler, J. , "The Establishment of a Management Information Systems Research Center at the Naval Postgraduate School.", M.S. Information Sciences, September 1989, Advised by T.K. Abdel-Hamid

Daniel, R. , "Decision Making Heuristics and Biases in Software Project Management: An Experimental Investigation.", M.S. Information Sciences, March 1990, Advised by T.K. Abdel-Hamid

Buzzard, R. , "A Prolog Implementation of Pattern Search to Optimize Software Quality Assurance.", M.S. Information Sciences, March 1990, Advised by T.K. Abdel-Hamid

Agan, C. , "Coupling Artificial Intelligence and a System Dynamics Simulation to Optimize Quality Assurance and Testing in Software Development.", M.S. Information Sciences, March 1990, Advised by T.K. Abdel-Hamid

Martin, B. , "Integrated Financial Reporting for a Small Business.", M.S. Information Sciences, March 1990, Advised by T.K. Abdel-Hamid

Goodwin, R. , "Feedback in Dynamic Decision Making: An Experiment in Software Project Management.", M.S. Information Sciences, March 1991, Advised by T.K. Abdel-Hamid

Smith, R. , "Investigating the Utility of Coupling COCOMO with a System Dynamics Simulation of Software Development.", M.S. Information Sciences, September 1991, Advised by T.K. Abdel-Hamid

Hardebeck, M., "Decision Making for Software Project Management in a Multiproject Environment: An Experimental Investigation.", M.S. Information Sciences, September 1991, Advised by T.K. Abdel-Hamid

Nora Gaye Stevens "The Application of Current User Interface Technology to Interactive Wargaming Systems", M.S. in Information Sciences, October 1987, Advised by T.X. Bui

William D. Dolan and James D. Ellison, "An Expert System for Causative Research in Inventory Management", M.S. in Information Sciences, June 1988, Advised by T.X. Bui

Nanette Marie Lorry, "Design of the Recruiter Selection Expert System", M.S. in Information Sciences, March 1989, Advised by T.X. Bui

Gary McLean, "An Automated Expert System for Collecting and Disseminating Tactical Intelligence", M.S. in Information Sciences, March 1989, Advised by T.X. Bui, Co-advisor: Carl Jones

Ali E. Tuncer "Design and Implementation of an Intelligent CAT Systems using a Bayesian Diagnostic Model", M.S. in Information Sciences, September 1989, Advised by T.X. Bui, Co-Advisor: Daniel Dolk

Donald C. Bennett "The Prototype Design of an Expert System to Assist in the Integration of Command Operations Center and Fire Support Coordination Center Functions.", M.S. in Information Sciences, March 1989, Advised by T.X. Bui, Co-Advisor: Lieutenant Colonel Gerald Pauler

David W. Acton, "Implementation of a Distributed Expert System for USN Submarine Shipboard Maintenance using VP-Expert", M.S. in Information Sciences, March 1990, Advised by T.X. Bui

Aaron Rouska "Conversion and Maintenance Issues of Navy Stock Points Expert Systems", M.S. in Information Sciences, March 1990, Advised by T.X. Bui

David England, "Creation of a Knowledge Base for Hazardous Material for the Navy Stock Points Exert Systems", M.S. in Information Sciences, March 1990, Advised by T.X. Bui

David England, "End-User Computing and Information System Planning for ABRI", M.S. in Information Sciences, September 1990, Advised by T.X. Bui

Gary Evans "Identifying Security Problems and Devising Control Strategies for Local Area Networks: A Case Study Approach", M.S. in Information Sciences, September 1990, Advised by T.X. Bui

John Manis III "Applicability of Artificial Intelligence in the Detection of Insurgency", M.S. in Information Sciences, September 1990, Advised by T.X. Bui

William Blazer, "An Integrated Cost Estimation Model for DSS", M.S. in Information Sciences, September 1990, Advised by T.X. Bui

Yvonne Hall, "Measuring the Perceived Effectiveness of the Internal Revenue Service's (IRS) Electronic Filing System from the Tax Preparers' Perspective", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

Carol P. Elliott, "An Evaluation of the Participation and Error Rates for the Electronic Filing System of the Internal Revenue Service for the San Jose District", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

William Blazer, "An Integrated Cost Estimation Model for DSS", M.S. in Information Sciences, September 1990, Advised by T.X. Bui

Bruce Gilley, "Interactive Group Decision Support System for Multi-attribute Bilateral Negotiations", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

Brad Jones, "Users' Motivation and Implementation of Computer Security Policies", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

Clark Price, "Implementation of a GDSS Software under Windows 3.0", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

Marryman Gretchen, "Evaluation of the IRS Electronic Filing of Tax Return Software", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

Fred Schwarz, "Information Systems Planning for the Naval Finance Center: Future Directions of Expert System Projects", M.S. in Information Sciences, March 1991, Advised by T.X. Bui

Peter S. Marsh, "Feasibility of a Single Database for U.S. Coast Guard Operational Reports", M.S. in Telecommunications Systems Management, June 1991, Advised by T.X. Bui

Graig McLane, "A Knowledge-based System for B-52 Re-Scheduling", M.S. in Information Sciences, March 1991, Advised by T.X. Bui, Co-Advisor: Joe Stewart

Bacheller, J.S., "Design And Implementation of a Prototype Microcomputer Database Management System For the Standardization of Data Elements", M.S. in Information Systems, September 1990, Advised by D.R. Dolk

Barnes, C.A., "Concepts Heirarchies for Extensible Database", M.S. in Information Systems, September 1990, Advised by D.R. Dolk

Barber, M.H. and Richey, P.R., "Naval Supply Systems Command: Data Administration Planning and Implementation", M.S. Information Systems, March 1989, Advised by Dolk, D.R.

Hill, D.S., "A Prototype for Converting Linear Programming (LP) Models to Structured Modeling Graphs", M.S. in Information Systems, March 1989, Advised by Dolk, D.R.

Horn, J.C., "Information Centers In the United States Army: Movement Toward Maturity Through Strategic Planning", M.S. in Information Systems, March 1989, Advised by Dolk, D.R. and Euske, K.L.

Kerrigan, D.F. (Jr), "Information Centers in the United States Navy: Future Support For A Computer Literate Society", M.S. in Information Systems, March 1989, Advised by Dolk, D.R. and Euske, K.J.

LeBlanc, P.W., "Information Centers in the United States Marine Corps: Control of End-User Computing", M.S. in Information Systems, March 1989, Advised by Dolk, D.R. and Euske, K.J.

Short, W.B. and Bockenek, J.M., "Analysis of the EPMIS Data Base", M.S. in Information Systems, September 1989, Advised by Dolk, D.R.

Myers, J.D., "End-User Computing Strategy in the United States Marine Corps", M.S. in Information Systems, March 1990, Advised by D.R. Dolk and K.J. Euske

Brinkley D.E. and Scyoc, P.G., "Distribution of Databases on CD-ROM", M.S. in Information Systems, September 1990, Advised by B.A. Frew

Rodriguez, J.F., "Management Concerns For Optical Based Filing Systems", M.S. in Information Systems, March 1990, Advised by B.A. Frew

Sweitzer, W.F., "Hypermedia and Digital Optical Media Technologies As Applied To A Prototype Geographic and Threat Recognition (GEOTREC) Training and Reference Tool", M.S. in Information Systems, March 1990, Advised by B.A. Frew

France, B.E. (Sr), "Moving Optical Technology In-house", M.S. Information Systems, March 1989, Advised by Frew, B.

Hode, F.C., "Use of Optical Storage Devices as Shared Resources in Local Area Networks", M.S. in Information Systems, Advised by Schneidewind, N.F. and Frew, B.A.

Livingston, W.T., "Fleet Numerical Oceanography Center Software Development Standards: An Implementation of DOD-STD-2176A", M.S. Information Systems, September 1988, Advised by Frew, B.A.

Paquette, R.E., "A Proposal for a Microcomputer Based System to Automate the Marine Corps Crime Statistics Reporting Program", M.S. in Information Systems, March 1988, Advised by Frew, B.A.

Taylor, R.R., "Conversion of Hard-Copy Documents to Digital Format Utilizing Optical Scanners and Optical Storage Media", M.S. Information Systems, March 1989, Advised by Frew, B.A.

Waindle, K.M., "What are the Barriers to Implementing Information Systems at a Fleet Aviation Squadron", M.S. Information Systems, March 1989, Advised by Frew, B.A.

Anderson, S.S. , "Is There A Shortage of Computer Programmers/Systems Analysts? An Examination of the Empirical Evidence", M.S. in Information Systems, September 1990, Advised by W.J. Haga

Beedenbender, M.G., "A Comparison of Password Techniques", M.S. in Information Systems, March 1990, Advised by W.J. Haga and M. Zviran

John, M.O. , "The Effect of Computerization on Production in Administrative Offices: A Comparative Analysis", M.S. in Information Systems, September 1990, Advised by W.J. Haga

Lang, R.G., "Revised Guidance for the Economic Evaluation of DOD Data Processing Systems", M.S. in Information Systems, September 1990, Advised by W.J. Haga and D.R. Henderson

Sablan, S.R., "Improving Data Quality in the Enlisted Master File", M.S. in Information Systems, March 1990, Advised by W.J. Haga

Sawyer, D.A., "The Characteristics of User-Generated Passwords", M.S. in Information Systems, March 1990, Advised by M. Zviran and W.J. Haga

Theberge, M., "Three Case Studies of Management Information Systems", M.S. in Information Systems, September 1990, Advised by W.J. Haga

McCutchion, D.A., "Use of Aviation 3-M Information Outputs by Organizational Maintenance Users", M.S. in Management, December 1989, Advised by W.J. Haga

Murphy, R.P. and Davis, L.S., "Personal Computer Use At Navy Field Activities: A Productivity Study", M.S. in Management, March 1990, Advised by W.J. Haga

Barclift, S.C. and Linson, D.D., "Impact of Office Automation: An Empirical Assessment", M.S. in Management, December 1988, Advised by Haga, W.J.

Mustofa, M.A., "Validity of Empirical Studies of Information Systems Effectiveness", M.S. in Management, June 1989, Advised by Haga, W.J.

Green, M.J., "The Israeli Defense Forces: An Organizational Perspective", M.S. in Systems Technology, March 1990, Advised by C.R. Jones and R.H. Magnus

Henderson, J.B., "Command and Control Architecture for Reconnaissance and Counterreconnaissance in the U.S. Army Armor and Mechanized Infantry Task Force", M.S. in Systems Technology, March 1990, Advised by C.R. Jones

McMahon, M.J., "An Operational Evaluation of the Army Tactical Command and Control System", M.S. in Systems Technology, June 1990, Advised by C.R. Jones

McMullin, J.D., "Determinants of the Effectiveness of Situation Estimation", M.S. in Systems Technology, June 1990, Advised by C.R. Jones

O'Leary, P.J., "Fire Support Coordination: A System Architecture Perspective", M.S. in Systems Technology, March 1990, Advised by C.R. Jones

Work, R.O., "Toward A National Space Warfighting Architecture: Forging A Framework for Debate About Space-Based Operational and Tactical Combat Support", M.S. in Systems Technology, September 1990, Advised by C.R. Jones

Minnema, J.E., "Expert Systems and Command, Control and Communication System Acquisition", M.S. in Systems Technology, March 1989, Advised by Jones, C.R. and Co-Advised by Hart, E.N.

Schroth, T.F., "An Introduction to Human Factors and Combat Models", M.S. in Systems Technology, March 1989, Advised by Jones, C.R. and Co-Advised by Parry, S.H.

Crouter, B.B., "Wargaming Communications for U.S. Pacific Command (U)", M.S. in Telecommunication Systems Management, March 1989, Advised by Jones, C.R.

Clemens, D.W., "Relational Database Design of a Shipboard Ammunition Inventory, Requisitioning, and Report System", M.S. in Information Systems, June 1990, Advised by M.N. Kamel

Lekey, R.W., "ACMS: A Prototype Expert Database For Air Combat Maneuvering", M.S. in Information Systems, March 1990, Advised by M.N. Kamel

Van Hook, G.E., "An Expert Database System For Shipboard Maintenance", M.S. in Information Systems, September 1990, Advised by M.N. Kamel

Rosynek, D.J. and Dreher, P.J., "Design and Implementation of an Operational Database for the Fleet Area Control and Surveillance Facility NAS North Island, San Diego, CA", M.S. Information Systems, March 1989, Advised by Kamel, M.N.

Smith, C.V., "The Use of Unix Based Workstations In the Information Systems Laboratory", M.S. in Information Systems, March 1989, Advised by Schneidewind, N.F. and Kamel, M.

Bischoff, D.A., "Analysis And Evaluation of Computer Support Afloat Submarine IMA Maintenance Planning", M.S. in Information Systems, March 1990, Advised by R. Knight

Kirouac, R. and Triebwasser, B.R., "Design and Implementation of a Dental Information Retrieval System (DIRS)", M.S. in Information Systems, March 1990, Advised by R.L. Knight

Newton, S.R., "Establishing a Selected Reserve Corporate Database", M.S. in Information Systems, March 1990, Advised by R. Knight

Zeiders, G. W., "Aligning Strategic and Information Systems Planning: A Review of Navy Efforts", M.S. in Information Systems, March 1990, Advised by R.L. Knight

Mason, L.E., "Requirements For Standard Application and Local Area Networks In Naval Aviation Squadrons", M.S. in Information Systems, September 1989, Advised by Knight, R.

Chase, J.H., "A Naval Aviation Maintenance Organization Activity Strategic Information System (OASIS)", M.S. in Information Systems, March 1990, Advised by M.J. McCaffrey

Smith, D.R., "The Influence of Contract Type in Program Execution/V-22 Osprey A Case Study", M.S. in Management, December 1989, Advised by M. McCaffrey

Thompson, K.B., "A Study of the Implementation and Administration of Warranties by Marine Corps Activities", M.S. in Management, December 1989, Advised by M.J. McCaffrey

Allen, D.L. and McSwain, "Naval Maintenance Decision Support System", M.S. Information Systems, March 1989, Advised by McCaffrey, M.J.

Suriano, D.A., "The Design of a Local Area Network Configuration Management System For the Naval Postgraduate School Administrative Sciences Department", M.S. in Information Systems, Schneidewind, N.F. and Sahlman, L.R.

John F. Weigand, "A Proposed Message System Architecture for a Marine Corps base Implementation of the Defense Message System (DM5)", M.S. Telecommunication Systems, March 1990, Advised by Schneidewind N.F.

Greg Rassest, Implementation Considerations to Connect an IBM Token-Ring LAN to the DDN Using TCP/ IP Protocol, M.S. Information Systems, March 1990, Advised by Schneidewind N.F.

Linda S. Mauck, Conversion of Mass Storage Hierarchy in an IBM Computer Network, M.S. Information Systems, March 1989, Advised by Schneidewind N.F.

David L. Andersland, "3Com Ether Series Local Network, M.S. Information Flow Systems, March 1989, Advised by Schneidewind N.F.

Charlotte V Smith, The Use of a UNIX-based Workstation in the Information Systems Laboratory M.S. Information Systems, March 1989, Advised by Schneidewind N.F.

John D. Mann, "PC to Mainframe Connection. IBM PC 3270 Emulation", M.S. Information Systems, March 1989, Advised by Schneidewind N.F.

Marty Buker, A Systematic Approach to Local Area Network Administration, M.S. Telecommunication Systems, March 1989, Advised by Schneidewind N.F.

Mark F. Burnett, An Assessment of the Integrated Services Digital Network in

Support of Command, Control, Communications and Intelligence Systems, M.S. Systems Technology, March 1989, Advised by Schneidewind N.F.

James C. Hage, Use of Optical Storage Disks as Shared Resources in Local Area Networks M.S. Information Systems, September 1989, Co-Advised by Schneidewind N.F.

Richard R. Alfini, Local Area Network Security Issues in an Academic Environment, M.S. Information Systems, September 1989, Advised by Schneidewind N.F.

Douglas A. Suriano, The Decision of a Local Area Network Configuration Management for the Naval Postgraduate School Administrative Sciences, Department, M.S. Information Systems, September 1989, Advised by Schneidewind N.F.

Connectivity Issues, Requirements, and Recommendations", M.S. in Information Systems, March 1990, Advised by M.W. Suh

Davis, E.S., "Developing a Comprehensive Methodology for Computer Family Selection", M.S. Information Systems, September 1989, Advised by Zviran, M.

Hansen, C.C., "Definition of a Decision support System (DSS) for Use by Application Developer within the Common Front-End system Architecture at the Marine Corps Central Design and Programming Activity, Kansas City, MO.", M.S. Information Systems, March 1989, Advised by Zviran, M.

(e) Graduate Courses Appropriate to the MIS Field and its Minors

IS 3000	Distributed Computer System (4-0)
IS 3020	Software Design (3-2)
IS 3170	Economic Evaluation of Information Systems (4-0)
IS 3502	Computer Networks: Wide Area/Local Area (4-0)
IS 3503	Micro-Computer Networks (3-2)
IS 4182	Information Systems Management (4-0)
IS 4183	Applications of Database Management Systems (4-1)
IS 4185	Decision Support Systems (4-1)
IS 4186	Knowledge-Based Systems (4-0)
IS 4200	System Analysis and Design (4-0)
IS 4300	Software Engineering and Management (4-0)
IS 4502	Telecommunications Network (4-0)
CS 3701	Introduction To Information Security and Policy (4-0)
CS 4601	Computer Security (4-0)

(f) Additional Courses Needed to Support Doctoral Work in MIS

IS47XX	Simulation (4-0)
IS47XX	Artificial Intelligence (4-0)
IS47XX	Model Management (4-0)

(g) Sample Ph.D. Program in Information Technology

First Year: Remove any deficiencies in meeting the core program requirements for the Ph.D. program. Take the additional IS courses (SIMULATION, ARTIFICIAL INTELLIGENCE, and MODEL MANAGEMENT). Pass preliminary exam and have doctoral committee appointed; begin work toward minor requirements in Administrative Sciences, Behavioral Sciences, Computer Science, Economics, or Operations Research according to interest.

At the end of the first year, a diagnostic review is conducted by members of the academic unit in the student's major field. The review considers such indicators of scholastic achievement as performance in research courses and doctoral courses deemed appropriate by the examining faculty. The review culminates in a formal report to the Chairman of the Departmental Ph.D. Committee and includes a recommendation as to whether or not the student should continue in the program and if so, make recommendations regarding how the student can improve his or her performance. A professor from the student's chosen academic unit then discusses the report with the individual, making a careful assessment of demonstrated strengths and weaknesses in order to help the student to progress more effectively.

**Second Year:** Finish minor requirements, select dissertation supervisor. Prepare for Qualifying Examination. Take Qualifying Examination near the middle of the second year. The written Qualifying Examination will cover 4 graduate level courses to be chosen by the student with the approval of the student's Ph.D. Committee.

**Third Year:** Concentrate primarily on dissertation research, with perhaps a course or two related to the dissertation.

The dissertation culminates the student's academic endeavors. Working closely with faculty members from his or her committee during all phases of preparation, the student is expected to present a dissertation of substantial contribution. The dissertation should make a significant contribution to the advancement of knowledge in the Management Information Systems field. It should be of sufficient originality and quality to merit publication, either whole or in part, in a professional publications.

The dissertation is defended at a final oral examination. It must be completed and accepted within seven and a half years from the date of entry into the program. The dissertation defense is held before an student's Ph.D. committee. The committee is composed of at least two MIS faculty members and two from other areas related to the dissertation topic. While any interested faculty member may attend the examination and participate in the discussion, only those individuals who are members of the student's Ph.D. committee may vote on the dissertation's approval or disapproval.

## ORGANIZATION AND MANAGEMENT

As a subfield of study, Organization and Management involves the understanding and management of organizational members, subunits, and entire organizations. Drawing heavily upon the social sciences, this field combines the following subdisciplines: (1) Organizational Behavior, (2) Organizational Theory, (3) Management Theory, (4) Strategic Planning and Policy, and (5) Planned Change.

The Ph.D. in Organization and Management prepares researcher/scholars who can make original contributions to Organization and Management research, whether basic or applied. The Organization and Management faculty places a high value on theory development and on the creative use of various methodologies for theory development and testing. Thus, students learn qualitative as well as quantitative research methods. The close ties of the Organization and Management faculty to Department of Defense organizations provide opportunity for students to gain access to large, complex organizations during their coursework and dissertation research.

### (a) Faculty Members Active in Management

Frank Barrett  
Roger D. Evered  
Reuben Harris  
Susan P. Hocevar  
Benjamin J. Roberts  
Nancy Roberts  
Sterling Sessions  
James E. Suchan  
Gail Fann Thomas  
Kenneth W. Thomas

### (b) Recent Publications of the Faculty

R. Evered, "Transferring managerial and organizational research: Creating a science that works", In Tannenbaum, et al., eds.: *Human Systems Development*, Jossey-Bass, 1985, pp. 419-457

R. Evered and J. Selman, "Managers anonymous", *New Management*, vol. 6, no. 2, Fall, 1988

R.D. Evered, "Future planning in management: Bibliography and information sources", Chicago, Ill., Council of Planning Libraries, (CPL Bibliography No. 5), May, 1979, 52 p.

R.D. Evered and M.R. Louis, "Alternative perspectives in the organizational sciences: Inquiry from the inside and Inquiry from the outside", *Academy of Management Review*, vol. 6, no. 3, p 385-395, 1981

R.D. Evered, "Management education for the year 2000", in C. Cooper, ed.: *Developing managers for the 1980's*, London, Eng., Homes and Meier, 1981, pp. 3-27

R.D. Evered, "The language of organizations: The case of the Navy", In L.R. Pondy, et al., eds: *Organizational symbolism*, Greenwich, Conn., JAI Press, 1983, pp. 125-143

R.D. Evered, "So what is strategy?", *Journal for Long Range Planning*, vol. 16, no. 3, July, 1983, pp. 57-72

R.D. Evered, "Who's talking about the future? An analysis of the U.S. Presidents", *Technological Forecasting and Social Change*, vol. 24, July, 1983, pp. 61-77

R.D. Evered, "Transforming managerial and organizational research: Creating a science that works", In J. Bulloch, et al., eds.: *Accountants' cost handbook*, 3rd ed., New York, N.Y., J. Wiley & Sons, 1983, 31 p.

R.D. Evered, "Alternative Perspectives in the Organizational Sciences", *Academy of Management Review*, vol. 6, 1981.

R.D. Evered, "Systems Thinking in Organizational Change", *Systems Theory for Organizational Development*, T. Cummings (ed.), Wiley, 1980.

R.D. Evered, "Management Education for the Year 2000", *Developing Management for the 80's*, C. Cooper (ed.), Holmes and Meier, 1981.

R.D. Evered, "Futures Planning in Management", *Council of Planning Librarians Bibliographies*, vol. 5, 1979.

R.D. Evered, "An Assessment of the Scientific Merits of Action Research", *Administrative Science Quarterly*, vol. 23, 1978.

R.D. Evered, "Some Human Consequences of Technology", *Humanitas*, vol. 14, 1978.

R.D. Evered "Interest in the Future", *Futures*, vol. 9, 1977.

R.D. Evered, "Personal Scenarios", *Human Relations*, vol. 30, 1977.

R.D. Evered, "Organizational Activism", *Human Relations*, vol. 30, 1977.

R.D. Evered, "A Typology of Explicative Models", *Technological Forecasting and Social Organization*, vol. 9, 1976

R.D. Evered, "The Strategic Decision Process" *Management in the World Tomorrow*, O. Liellriegel J. Slocum (eds.), Addison-Wesley, 1975.

James Suchan and Ron Dulek, "A Reassessment of Clarity in Written Managerial Communications," *Management Communication Quarterly* (forthcoming).

James Suchan and Robert Colucci, "Communication Efficiency Between High Impact and Bureaucratic Written Communication," *Management Communication Quarterly*, Vol 2, No. 4 (Spring, 1989), 452-484.

Ron Dulek and James Suchan, "Employment Letters: A Neglected Area in the Job Search," *Business Horizons* Vol 31, No. 6 (November-December 1988 70-75.

James Suchan and Ron Dulek, "Toward a Better Understanding of Reader Analysis," *Journal of Business Communication*, Vol. 25, No. 2 (Spring 1988), 30-46.

Clyde Scott and James Suchan, "Public Sector Collective Bargaining Agreements: How Readable Are They?," *Public Personnel Management*, Vol. 16, No. 1 (Spring, 1987), 15-23.

James Suchan and Ron Dulek, "An Empirical Assessment of Style: Trained and Untrained Students' Responses," *Journal of Business Communication*, Vol. 23, No. 2 (Spring, 1986). 57-65.

James Suchan and Clyde Scott, "Plain Talk Across the Bargaining Table: Unclear Contract Language and Its Effect on Corporate Culture," *Business Horizons*, (January/February, 1986), 20-25.

James Suchan and Clyde Scott, "Readability Levels of Collective Bargaining Agreements," *Personnel Administrator*, (November, 1984), 73-80.

Ronald Dulek and James Suchan, "Between Language Extremists: Find a Happy Medium for Business Memos," *Personnel*, (September-October 1983), 69-77.

James Suchan and Robert Day, "A Human Factors Assessment of the Effectiveness of Electronic Mail," Proceedings, *The Association for Business Communication International Conference*, October 1988, Indianapolis, Indiana, 193-211.

James Suchan and Robert Colucci, "Attributes Public Sector Professionals Ascribe to Writers of High Impact and Bureaucratic Communications," proceedings, *The Association for Business Communication International Conference*, October 1987, 189-204.

James Suchan, Tung Bui, and Dan Polk, "GDSS Effectiveness: Identifying Organizational Opportunities," *Hawaii International Conference on System Sciences, Proceedings*, January 1987, 441-449.

James Suchan, "Group Decision Support Systems: A Communication Breakthrough or a High-Tech Barrier?" Proceedings, *The Association for Business Communication International Conference*, November 1986, 89-96.

James Suchan and Unal Boya, "Readability Formulas and Print Ads: Problems and A New Approach," Proceedings, *American Marketing Association Educators' Conference*, August 1986, 201-205.

James Suchan, "Does Style Affect the Reader's Image of the Writer?," Proceedings, Southwestern Federation of Administrative Disciplines, (March, 1985), 3-22.

James Suchan, Tung Bui, and Dan Polk, "GDSS Effectiveness: Identifying Organizational Opportunities," in *Co-op: A Group Decision Support Systems for Cooperative Multiple Criteria Group Decision Making* by Tung Bui (Springer-Verlag: New York, 1987), 149-161. Chapter originally appeared in Proceedings, *Hawaii International Conference on System Science* January 1987, 441-449.

James Suchan, "Investigative Report Writing: A Field Study," Defense Personnel Security Research and Educational Center, PERS-SR-89-009, Mart 1989, 34 pages.

G.F. Thomas & L. Smeltzer "The Use of Information From Competitors and About Competitors in Small Business Management.", *Entrepreneurship: Theory and Practice*, 13(4), 35-46, 1989.

L. Smeltzer and G.F. Thomas "The Relationship Among Organizational Climate, Communication Apprehension, and Locus of Control," *Psychological Reports*, 64, 1143-1146, 1989.

G.F. Thomas & L. Smeltzer "Communication Attributes Used by Small Business Owner/Managers for Operational Decision Making." *Journal of Business Communication*, 26(4), 305-321, 1989.

L. Smeltzer & G.F. Thomas "Gender Differences in External Networks of Small Business Owners/ Managers." *Journal of Small Business Management*, 27(2), 25-32, 1989.

L. Smeltzer & G.F. Thomas "Comparison of Managerial Communication Patterns in Small Entrepreneurial and Large, Mature Organizations." *Group and Organizational Studies*, 14(2), 198-215, 1989.

L. Smeltzer, G.F. Thomas & Nikolaisen, N. "Environmental Scanning Practices in Small Business," *Journal of Small Business Management* 26(3), 55-62, 1988.

G.F. Thomas & Lynch, D. "A Longitudinal Study of Attitudes Toward the Microcomputer as a Writing Tool." *Office Systems Research Journal*, 1989.

G.F. Thomas & Lynch, D. "Assessing Our Audience: Business Communication Students' Experiences with and Attitudes Toward the Microcomputer." *Journal of Technical Writing and Communication*, 1989.

G.F. Thomas, Lynch, D. & Murranka, P. "Integrating Technology: Attitudes as a Determinant of the Use of the Microcomputer in Business Communication," *Journal of Educational Technology Systems*, 17(~), 307-317, 1989.

L. Smeltzer & G.F. Thomas "Analysis of Competitors as a Source of Information in Small Business Management," in J. Prescott, (ed.), *Advances of Competitive Intelligence*, pp. 189-200, Vienna, Virginia: Society of Competitor Intelligence Professionals, 1989.

G.F. Thomas "Management Systems," in B.S. Xaliski (Ed.), *Asserting and Reasserting the Role of Business Education*, pp. 181-188, Reston, Virginia: NBEA Association, 1989.

G.F. Thomas & Keller, T. "Postsecondary Students' Attitudes Toward Communicating Electronically," *Office Systems Research Association Proceedings*, pp. 22-43, March 1988.

L. Smeltzer & G.F. Thomas "Analysis of Competitors as a Source of Information in Small Business Management," Nominated for Best Paper Award. *Western Academy of Management Meeting*; Big Sky, Montana, March 25, 1988.

R.H. Kilmann, K.W. Thomas, D.P. Slevin, R. Nath, and S.L. Jerrell (Eds.), *"Producing Useful Knowledge for Organizations"*, New York: Praeger, 1983

K.W. Thomas, R.E. Walton, and J.M. Dutton, "Determinants of Interdepartmental Conflict", in M. Tuite, R. Chisholm, and M. Radnor (Eds.), *Interorganization Decision Making*, Chicago: Aldine, 1983, pp. 45-69

K.W. Thomas, "Conflict and Conflict Management", in M.D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology*, Rand McNally, Chicago, 1976, pp.889-935

K.W. Thomas, "Conflict", in S. Kerr (Ed.), *"Organizational Behavior"*, Grid Publications, Columbus, OH, 1979, pp. 151-181

K.W. Thomas, "Manager and Mediator: A Comparison of Third-Party Roles Upon Conflict Management Goals", in G.B. Bomers and R.B. Peterson (Eds.), *Conflict Management and Industrial Relations*, Kluwer-Nijhoff Publishing, Boston, Mass., 1982, pp. 141-157

R.H. Kilmann, D.P. Slevin, and K.W. Thomas, "The Problem of Producing Useful Knowledge", in R.H. Kilmann, K.W. Thomas, D.P. Slevin, R. Nath and S.L. Jerrell (Eds.), *Producing Useful Knowledge for Organizations*, Praeger, New York, 1983, pp. 1-21

K.W. Thomas and R.H. Kilmann, "Where Have The Organizational Sciences Gone: A Survey of the Academy of Management Membership", in R.H. Kilmann, K.W. Thomas, D.P. Slevin, R. Nath and S.L. Jerrell (Eds.), *Producing Useful Knowledge for Organizations*, Praeger, New York, 1983, pp. 69-81

D.W. Jamieson and K.W. Thomas, "The Social Power Inventory", in J. Litterer and R.J. Lewicki (Eds.), *Dynamics of Bargaining: Readings, Cases and Role-Plays*, R.D. Irvin, Homewood, IL, 1984

K.W. Thomas, "Psychological Resources for Collaboration: Empowerment as a Conflict-Management Intervention", in A. Larocque, Y. Bordeleau, R. Boulard, B. Fabi, V. Larouche, and A. Rondeau (Eds.), *Technologies Nouvelles et Aspects Psychologiques*, Presses de L'Universite du Quebec, Quebec, 1987

K.W. Thomas and W.G. Tymon, Jr., "Structural Approaches to Conflict Management", in R. Tannenbaum, N. Margulies, and R. Massarik (Eds.), *Human Systems Development*, Jossey-Bass, San Francisco, CA, 1985

K.W. Thomas, "Norms as an Integrative Theme in Conflict and Negotiation: Correcting our 'Sociapatic' Assumptions", in M.A. Rahim (Ed.), *Managing Conflict: An Interdisciplinary Approach*, Praeger, New York, 1988

M. Pilisuk, P. Skolnick, K.W. Thomas, and R. Chapman, "Boredom vs. Cognitive Reappraisal in the Development of Cooperative Strategy", *Journal of Conflict Resolution*, Vol. 11, 1967, 110-116

L.G. Cooper and K.W. Thomas, "Divergent Perceptions of Disagreement", *Behavioral Science*, Vol. 19, 1974, 336-343

K.W. Thomas and R.H. Kilmann, "The Social Desirability Variable in Organizational Research: An Alternative Explanation for Reported Findings", *Academy of Management Journal*, Vol. 18, 1975, 741-752

R.H. Kilmann and K.W. Thomas, "Interpersonal Conflict-Handling Behavior as Reflections of Jungian Personality Dimensions", *Psychological Reports*, Vol. 37, 1975, 971-980

K.W. Thomas and W.H. Schmidt, "A Survey of Managerial Interests with Respect to Conflict", *Academy of Management Journal*, Vol. 19, 1976, 315-318

T.R. Ruble and K.W. Thomas, "Support for a Two-Dimensional Model of Conflict Behavior", *Organization Behavior and Human Performance*, Vol. 2, 1977, 303-318

R.H. Kilmann and K.W. Thomas, "Developing a Forced-Choice Measure of Conflict Behavior: The 'MODE' Instrument", *Educational and Psychological Measurement*, Vol. 37, 1977, 309-325

K.W. Thomas and L.R. Pondy, "Toward an 'Intent' Model of Conflict Management Among Principal Parties", *Human Relations*, Vol. 30, 1977, 1089-1102

R.H. Kilmann and K.W. Thomas, "Four Perspectives on Conflict Management: An Attributional Framework for Organizing Descriptive and Normative Theory", *Academy of Management Review*, Vol. 3, 1978, 59-68

K.W. Thomas and R.H. Kilmann, "Comparison of Four Instruments Measuring Conflict Behavior", *Psychological Reports*, Vol. 42, 1978, 1139-1145

K.W. Thomas, "Conflict and The Collaborative Ethic: An Introduction", special sub-issue on "Conflict and the Collaborative Ethic", *California Management Review*, Vol. 21, 1978, 56-60

K.W. Thomas, D.W. Jamieson, and R.K. Moore, "Conflict and Collaboration: Some Concluding Observations", special sub-issue on "Conflict and the Collaborative Ethic", *California Management Review*, Vol. 21, 1978, 91-95

L.W. Walker and K.W. Thomas, "Beyond Expectancy Theory: An Integrative Motivational Model from Health Care", *Academy of Management Review*, Vol. 7, 1982, 187-194

K.W. Thomas and W.G. Tynon, Jr., "Necessary Properties of Relevant Research: Lessons from Recent Criticisms of the Organizational Sciences", *Academy of Management Review*, Vol. 7, 1982, 345-352

K.W. Thomas, "Worker Interests and Managerial Interests: The Need for Pluralism in Organization Development", *Proceedings of the 29th Meeting*, Industrial Relations Research Association, 1977, 338-334

K.W. Thomas, L.W. Boone and B.A. Velthouse, "An Investigation of the Effect of Gender on Managers' Use of Power", *HRMOB Proceedings*, Annual National Conference of the Association of Human Resources Management and Organizational Behavior, 1986, Vol. II, 216-220

L.W. Boone, B.A. Velthouse and K.W. Thomas, "Superior-Subordinate Perceptions of Power in Use", *HRMOB Proceedings*, Annual National Conference of the Association of Human Resources Management and Organizational Behavior, 1987, Vol. I, 281-285

K.W. Thomas, "The Conflict-Handling Modes" Toward More Precise Theory", *Management Communication Quarterly*, Vol. 1, 1988, 430-436

K.W. Thomas and B.A. Velthouse, "Cognitive Elements of Empowerment: An 'Interpretive' Model of Intrinsic Task Motivation", *Academy of Management Review*, Vol. 15, October, 1990, 666-681

L.W. Boone, B.A. Velthouse and K.W. Thomas, "Superior-Subordinate Perceptions of Power in Use", *Journal of Management Systems*, Vol. 2, Summer 1990, 77-86

**(c) Ph.D. Dissertations Supervised by Organization and Management Faculty Members**

**Ralph H. Kilmann, "The Development and Validation of a Protective Measure of Interpersonal Values", Graduate School of Management UCLA, 1972, Supervised by K.W. Thomas**

**Thomas L. Ruble, "The Role of Causal Attribution in Conflict-Handling Behavior", Graduate School of Management, UCLA, 1973, Supervised by K.W. Thomas**

**David W. Jamieson, "Organizational Change and Development in Schools: An Assessment of a Structural/Process Strategy for Redesigning and Developing the Management System", Graduate School of Management, UCLA, 1976. Supervised by K.W. Thomas**

**Brhane Tesfay, "Labor and Management Negotiators in Kenya", Graduate School of Management, UCLA, 1977, Supervised by K.W. Thomas**

**Young Doo Lee, "The Enhancement of intrinsic Motivation Through The Mechanism of Feedback: An Experimental Study", Katz Graduate School of Business, University of Pittsburgh, 1987, Supervised by K.W. Thomas**

**(d) Recent M.S. Theses Supervised by the Organization and Management Faculty**

**Boggs, S.R. , "Job Satisfaction Within The Military Entrance Processing Station and Its Relationship To Quality of Performance", M.S. in Management, June 1990, Advised by R.D. Evered**

**Bromund, C.D., "Implementing Strategy In A Buget: A Model of the Coast Guard Reserve", M.S. in Management, June 1990, Advised by R. Evered**

**Kelley, B.D., "Coast Guard Strategic Management: Law Enforcement in the 1990's", M.S. in Management, June 1990, Advised by R.D. Evered**

**Mellon, J.J., "Marine Corps Financial Management Officer Training in the 1990's", M.S. in Management, June 1990, Advised by R.D. Evered**

**Neil, R.C., "The Graduate Record Examination (GRE) as a Predictor of Success at the Naval Postgraduate School: A Validation Test", M.S. in Management, June 1989, Advised by Evered, R.D.**

Nostrant, C.H., "A Cost/Benefit Analysis of the Supply Management Assessment Program", M.S. in Management, June 1989, Advised by Evered, R.D. and Co-Advised by Mathews, D.G.

Gruendl, L.H., "A Comparison of the Managerial Characteristics of Mid-Grade Navy Unrestricted Line Officers", M.S. in Management, December 1989, Advised by R.S. Elster and B.J. Roberts

Lindner, T.E. and Davis, M.E., "A Comparative Analysis of Factors Affecting the Career Orientation of Naval Officers and Federal Civilian Engineers", M.S. in Management, March 1990, Advised by B.J. Roberts and K.W. Thomas

O'Brien, R.M., "A Comparison of Training Effectiveness of Formal and On-The-Job Enlisted Rate Training in the United States Coast Guard", M.S. in Management, December 1989, Advised by B. Roberts

Johnston, L.W., "The TQM Coordinator as Change Agent in Implementing Total Quality Management", M.S. in Management, June 1989, Advised by Roberts, B.J. and Co-Advised by Hart, E.N.

Lapidot, O., "Debriefing Process for the Maintenance Sections of the Israeli Air Force Fighter Squadrons", M.S. in Management, December 1988, Advised by Roberts B.J.

Shigley, E.M., "An Analysis For Factors Affecting the Career Plans of Military Nurses", M.S. in Management, December 1988, Advised by Roberts, B.J.

Powell, J.L., "Prototype Development and Redesign: A Case Study", M.S. in Information Systems, March 1990, Advised by N.C. Roberts

Hilliker, T.L. and Jesson, W.S., "The Marine Corps Service Planning Process-The Continual Forging and Tempering of the Sword", M.S. in Management, December 1989, Advised by N.C. Roberts

Leahey, M.J., "A History of Defense Reform Since 1970", M.S. in Management, December 1989, Advised by N.C. Roberts

Wilson, D.J., "A Comparative Analysis of Public and Private Sector Graduate Programs in Public in Policy", M.S. in Management, December 1989, Advised by N.C. Roberts

Kropp, R.D., "JCS Planning: Assessment and Recommendations", M.S. Information Systems, September 1989, Advised by Roberts, N.C. and Co-Advised by Tritten, J.J.

Regis, E.A., "How Female Officers' Performance in Non-Traditional U.S. Navy Shipboard Jobs Compares To Male Officers' Performance: A Proposal for Analysis", M.S. in Management, December 1988, Advised by Roberts, N.C.

Gilbert, G.S., "Survey and Analysis of Surface Warfare Officer Career Path Issues", M.S. in Operations Research, September 1989, Advised by Roberts, N.C.

Clark, C. and Miller, R.W., "Experimental Research and Empirical Testing of Distributed Group Decision Support Systems", M.S. Information Systems, March 1989, Advised by Suchan, J.E.

Neih, T., "Leadership Theory and Practice Where East Meets West", M.S. in Management, June 1989, Advised by Suchan, J.E. and Co-Advised by McGonigal, R.A.

Hasselbalch, J.M., "Sources of Job Satisfaction and Dissatisfaction Among Mid-Grade Coast Guard Officers", M.S. in Management, June 1990, Advised by R.A. McGonigal and K.W. Thomas

Pafford, M.E. and Munn, L.V., "A Comparison of Information Systems and Non-Information Systems Personnel Working in Non-Information systems Organizational Departments", M.S. Information Systems, March 1989, Advised by Thomas, K.W. and Co-Advised by Sivasankaran, T.R.

(e) Upper Division Courses Appropriate to the Organization and Management Field and its Minors

MN 4105	Management Policy (4-0)
MN 4121	Organization Theory (4-0)
MN 4125	Managing Planned Change in Complex Organizations (4-0)
MN 4127	Seminar in Organization Behavior (V-0)

(f) Additional Graduate Courses Suggested to Support Doctoral Work in Organization and Management

MN 4123,4	Research Methods in Management I, II (4-0)
MN 4126	Theory Building in Management (4-0)
MN 4128	Contemporary Developments in Management (4-0)

### **(g) Sample Ph.D. Program in Organization and Management**

**First Year:** Remove any deficiencies in meeting the core program requirements for the Ph.D. program. Take the additional Organization and Management courses (RESEARCH METHODS IN MANAGEMENT I & II, THEORY BUILDING IN MANAGEMENT, and CONTEMPORARY DEVELOPMENTS IN MANAGEMENT). Pass preliminary exam and have doctoral committee appointed; begin work toward minor requirements in Administrative Sciences, Behavioral Sciences, Computer Science, Economics, or Operations Research according to interest.

At the end of the first year, a diagnostic review is conducted by members of the academic unit in the student's major field. The review considers such indicators of scholastic achievement as performance in research courses and doctoral courses deemed appropriate by the examining faculty. The review culminates in a formal report to the Chairman of the Departmental Ph.D. Committee and includes a recommendation as to whether or not the student should continue in the program and if so, make recommendations regarding how the student can improve his or her performance. A professor from the student's chosen academic unit then discusses the report with the individual, making a careful assessment of demonstrated strengths and weaknesses in order to help the student progress more effectively.

The level of competence expected in the major field (Organization and Management) is that of a professional research scholar who is contributing to that field's progress. This implies a broad knowledge of the field and its literature and a detailed understanding of current research in at least one subfield.

**Second Year:** Finish minor requirements, select dissertation supervisor, and prepare for Qualifying Examination. Take Qualifying Examination near the middle of the second year. The written Qualifying Examination will cover 4 graduate level courses to be chosen by the student with the approval of the student's Ph.D. Committee.

**Third Year:** Concentrate primarily on dissertation research, with perhaps a course or two related to the dissertation.

The dissertation culminates the student's academic endeavors. Working closely with faculty members from his or her committee during all phases of preparation, the student is expected to present a dissertation of substantial contribution. The dissertation should make a significant contribution to the advancement of knowledge in Organization and Management field. It should be of sufficient originality and quality to merit publication, either whole or in part, in a professional publications.

The dissertation is defended at a final oral examination. It must be completed and accepted within seven and a half years from the date of entry into the program. The dissertation defense is held before an student's Ph.D. Committee. The committee is composed of at least two Organization and Management faculty members and two from other areas related to the dissertation topic. While any interested faculty member may attend the examination and participates in the discussion, only those individuals who are members of the student's Ph.D. committee vote on the dissertation's approval or disapproval.

## INTEGRATED LOGISTICS

As the title suggests, this field of study encompasses the three highly overlapping areas of logistics, transportation, and operations management, also known as integrated logistics (IL). To produce goods or services (products), a system acquires inputs (e.g., raw materials) that are transported across space and time to the production facility, where their function is transformed (production). The products, in turn, are transported across space and time to where and when they are needed. Logistics is concerned with acquisition (including design issues relating to the life cycle costs involved), transportation (space transformation), storage (time transformation) and maintenance. Thus it can be viewed as a broad field that includes transportation as a sub-field. Operations management is concerned both with logistics (including transportation) operations and with production operations, and bridges the gap between the logistics of acquisition of inputs and the logistics of distribution of outputs.

While much of the theory involved in the Integrated Logistics field of study is based on analytical studies of physical systems, where the function transformation element, if it exists, is manufacturing goods, there is a growing number of applications of such models to the production of services. For instance, many quality assurance ideas developed for manufacturing are now applied to services, and DOD is committed to do so across the board in its own operations. Needless to say, DOD is involved in large scale physical logistics operations, some in-house manufacturing, much coordination with external manufacturers and service providers, and a lot of service operations management (including large-scale maintenance operations). All these applications provide a rich area of research and study.

The Ph.D. program in logistics, transportation and operations management/integrated logistics prepares scholars who have a firm understanding of the technical and organizational aspects of the subject, as well as analytical and empirical skills with which to contribute to scientific knowledge in this area.

**(a) Faculty Members Active in Logistics, Transportation and Operations Management**

Dan C. Boger  
David G. Brown  
Keebom Kang  
Alan W. McMasters  
Thomas P. Moore  
Dan Trietsch

**(b) Recent Publications of the Faculty**

D.C. Boger, "The Effects of Different Production Rate Measures and Cost Structures on Rate Adjustment Models," with S.S. Liao, in *Cost Analysis and Estimating: Tools and Techniques*, Springer-Verlag, 1990, pp. 82-98.

D.C. Boger, "Measuring Private and Social Costs in Inland Waterway Freight Transportation," *Research in Transportation Economics*, T.E. Keeler (ed.), Volume 2, 1985, JAI Press, pp. 149-212.

D.C. Boger, "Statistical Modeling and Prediction of Quarterly Overhead Costs," *Journal of Cost Analysis*, Spring 1991, pp. 63-78.

D.C. Boger, W.R. Greer and S.S. Liao, "Separating Myths from Facts in Competitive Weapons Systems Acquisition," *Proceedings of the 1989 Acquisition Research Symposium*, Defense Systems Management College, Fort Belvoir, VA, October 1989, pp. 201-208.

D.C. Boger, W.R. Greer and S.S. Liao, "Competition in Defense Acquisition: Myths and Facts," *Defense Analysis*, Vol. 5, No. 3, 1989, pp. 245-255.

D.C. Boger and S.S. Lao, "An Analysis of Data Requirements for Parametric Models of Nonrecurring Costs," *Journal of Parametrics*, Vol. VIII, No. 2, June 1988, pp. 12-25.

D.C. Boger and M.W. Jee, "Potential Korean Contributions to the U.S. Mobilization Base," *Proceedings of the Seventh Annual Mobilization Conference*, Industrial College of the Armed Forces, April 1988, pp. 209-228.

D.C. Boger, C.F. Myers and J.L. Fanelli, "Assessing the Impact of Consolidation on Inbound Vendor Traffic," *Journal of the Transportation Research Forum*, Vol. III, No. 1, 1987, pp. 230-236.

D.C. Boger and S.S. Liao, "An Analysis of Dual-Award Quantity-Split Models," *Program Manager*, Vol. XVI, No. 2, March-April 1987, pp.30-36.

D.C. Boger and C.F. Myers, "Measuring the Effects of Competition on Motor Carrier Rates: DoD's Guaranteed Traffic Program," *Proceedings of the Transportation Research Forum*, Vol. ~II, No. 1, 1986, pp. 172-176.

D.C. Boger and S.S. Liao, "Estimating Nonrecurring Costs for Dual Sourcing Decisions," *Journal of Parametrics*, Vol. VI, No. 2, June 1986, pp. 66-78.

D.C. Boger, "Statistical Models for Predicting Overhead Costs," *Proceedings of the 1985 Federal Acquisition Research Symposium*, Defense Systems Management College, Fort Belvoir, VA, November 1985, pp. 259-263.

D.C. Boger, W.R. Greer and S.S. Liao, "Dual Sourcing and Cost Savings," *Proceedings of the 1985 Federal Acquisition Research Symposium*, Defense Systems Management College, Fort Belvoir, VA, November 1985, pp. 179-183.

D.C. Boger and N.R. Lyons, "The Organization of the Software Quality Assurance Process," *Data Base*, Winter 1985, pp. 11-16.

D.C. Boger, "Statistical Modeling of Overhead Costs," *Engineering Costs and Production Economics*, December 1984, Vol. 8, No. 3, pp. 145-156.

D.C. Boger, C.R. Jones and N.R. Lyons, "Improving Federal Information Systems Management: Technological Opportunities and Social Constraints," *Proceedings of the Fourth International Conference on Information Systems*, December 1983, pp. 163-174.

D.C. Boger, C. R. Jones and K C. Sontheimer, "What ARE the Incentives in Incentive Contracts?" *Defense Management Journal First Quarter* 1983, Vol. 19, No. 1, pp. 17-22.

D.C. Boger, C.R. Jones and K.C. Sontheimer, "An Analysis of the Incentives Present in Incentive Contracts," *Proceedings of the 1982 Federal Acquisition Research Symposium*, U.S. Army Procurement Research Office, Ft. Lee, VA, May 1982, pp. J-1 1 --J-1 8.

D.C. Boger, R.N. Folsom and H.C. Mulliken, "Stability Conditions for Linear Constant Coefficient Difference Equations in Generalized Differenced Form", *Econometrica*, May 1976, Vol. 44, No. 3, pp. 575-592.

D.C. Boger and S.S. Liao, "Aircraft Modifications Cost Analysis, Volume 6: Offensive Avionics System and Cruise Missile Integration of the B-52 Stratofortress," NPS-AS-91-012PR, Naval Postgraduate School, July 1991.

D.C. Boger and S.S. Liao, "Aircraft Modifications Cost Analysis, Volume 5: 5-3A Weapon System Improvement Program," NPS-AS-91 -007PR, Naval Postgraduate School, April 1991.

D.C. Boger, S.S. Liao, "Aircraft Modifications Cost Analysis, Volume 4: 5-3A Increased Capacity Auxiliary Power Unit," NPS-AS-91 -006PR, Naval Postgraduate School, March 1991.

D.C. Boger and D.A. Nussbaum, "Competition in Weapon Systems Acquisition: Cost Analysis of Some Issues," NP5-54-90-021, Naval Postgraduate School, September 1990.

D.C. Boger and S.S. Liao, "Aircraft Modifications Cost Analysis, Volume 3: C-5A Wing Modifications Study," NPS-54-90-01 8PR, Naval Postgraduate School, July 1990.

D.C. Boger and S.S. Liao, "Aircraft Modifications Cost Analysis, Volume 2: C-141 B Stretch Program," NPS-54-90-011 PR, Naval Postgraduate School, June 1990.

D.C. Boger and S.S. Liao, "The Effects of Different Production Rate Measures and Cost Structures on Rate Adjustment Models," NPS-54-90-006, Naval Postgraduate School, February 1990.

D.C. Boger and S.S. Liao, "Aircraft Modifications Cost Analysis, Volume 1: Overview of the Study," NP5-54-90-005, Naval Postgraduate School, February 1990.

D.C. Boger, W.R. Greer and S.S. Liao, "Competition in Defense Acquisition: Myths and Facts," NPS-54-89-04, Naval Postgraduate School, March 1989.

D.C. Boger, R.M. Carney and K.J. Euske, "A Managerial Assessment of the Productivity Investment Fund," NP5-54-88-01 1, Naval Postgraduate School, September 1988.

D.C. Boger and S.S. Liao, "Quantity-Split Strategy Under Two-Contractor Competitive Procurement Environment," NPS-54-88-008, Naval Postgraduate School, August 1988.

D.C. Boger and S.S. Liao, "On the Feasibility of Creating a Comparable Database for Nonrecurring Cost Analysis Under Dual Source Competition," NPS-54-87-004, Naval Postgraduate School, May 1987.

D.C. Boger and C.F. Myers, "DoD's Guaranteed Traffic Program and Motor Carrier Rates," NP5-54-86-007, Naval Postgraduate School, July 1986.

D.C. Boger and C.F. Myers, "Federal Information Systems Management: Problems, Solutions, and More Problems," NPS-54-86-006, Naval Postgraduate School, July 1986.

D.C. Boger, "An Analysis of Quantity Split and Nonrecurring Costs Under Competitive Procurement Environments," (2 Volumes) with S.S. Liao, NP5-54-85-08, Naval Postgraduate School, September 1985.

D.C. Boger, "Notes from the Stockpile Seminar," with A.R. Washburn, NPS-55-85-01 4, Naval Postgraduate School, August 1985.

D.C. Boger and T. Jayachandran, "Evaluating Alternative Long-Run Forecasts of Inflation," NPS-54-84-021, Naval Postgraduate School, July 1984.

D.C. Boger, "Pooling Time-Series and Cross-Section Data: An Overview," NPRDC SR 84-8, Naval Personnel Research and Development Center, San Diego, CA, November 1983.

D.C. Boger and N.R. Lyons, "A Productivity Enhancement Study of the FMSO Software Effort," NPS-54-83-013, Naval Postgraduate School, November 1983.

D.C. Boger, "Statistical Models for Estimating Overhead Costs," NPS-54-83-01 4, Naval Postgraduate School, October 1983.

D.C. Boger and P. Bromiley, "The Cost of Graduate Education During Fiscal Year 1981 at the Naval Postgraduate School," NPS-54-83-003PR, Naval Postgraduate School, April 1983.

Brown, D.G., "Freight Service Quality and Carrier Economics," *Journal of the Transportation Research Forum*, 30, No. 1, pp. 141-152, 1989. Errata: No. 2, pp. 558-561.

Brown, D.G. D.R. Uzarski and R.W. Harris, "Detailed Inspection of U.S. Army Railroad Trackage and Application to Civilian Short Line Railroads," to appear in *Transportation Research Record*.

Brown, D.G., "Freight Service Quality Cost Economics and a Hypothetical Railroad Example," paper accepted for publication and presentation at the *January 1991 Annual Meeting of the Transportation Research Board*.

Goldsman, D., K. Kang and A.F. Seila, "Cramer-von Mises Variance Estimators for Simulations," to appear in *Proceedings of 1991, Winter Simulation Conference*, Dec 1991.

Sargent, R. G., K. Kang and D. Goldsman, "An Investigation of Small Sample Size Behavior of Confidence Interval Estimation Procedures," Technical Report #NPS-AS-91-09, Naval Postgraduate School, 1991, to appear in *Operations Research*.

Kang, K., M. Bailey and J.H. Eu, "Statistical Properties of Out-of-frame Detection Schemes for Digital Transmission Systems," to appear in *IEEE Transactions on Communications* (NPS Technical Report NPS-55-90-5).

Kang, K., "Book Review: Discrete Simulation: Fun'lam en tall and Microcomputer Support by Curry, G. L., et. al.", *Journal of Technology*, Vol.22, No.2, 1990, pp.168-169.

Kang, K. and B.W. Schmeiser, "Graphical Evaluation and Comparison of Confidence-Interval Procedures," *Operations Research*, Vol.38, No.3, 1990, PP.546-553.

Kang, K. and D. Goldsman, "The Correlation between Mean and Variance Estimators in Computer Simulation," *IEEE Transactions*, Vol. 22, No.1, 1990, pp.15-23.

Kim, S. H., and K. Kang, "R&D Project Selection in Hong Kong, Korea, and Japan," *International Journal of Technology Management*, Vol. 4, No.6, 1989, pp.673-679.

Kang, K., N. Boubekri and Jaramillo, "Simulation Modeling and Performance Evaluation of Printed Circuit Board (PCB) Assembly," *Productivity Management Frontier - II*, ed., D.J. Sumanth et al., 1988, pp.173-182.

Coll, I.M., J.R. Martinez, and K. Kang, "Seating Configuration Problem," *Proc. of 1988 IEEE Integrated Systems Conference*, 1988.

Kang, K., E. Alvarez, W. Kamp, and M. Kinard, "Design of Central Payment Processing System," *Technology Management 1*, ed. T.M. Khalil et al., 1988, pp.523-529.

Kang, K. and B. W. Schmeiser, "Properties of Batch Means from Stationary ARMA Time Series," *Operations Research Letters*, Volume 6, No. 1, 1987, pp.19-24.

Goldsman, D. and K. Kang, "A State of the Art Survey of Confidence Interval Estimation Techniques," *Methodology and Validation*, ed. O. Balci, Simulation Series Volume 19, No. 1, 1987, pp.60-65.

Martinez, J., I. Coil and K. Kang, "Labor/Service Implications of Introducing a New Product in the Fast Food Industry," *Methodology and Validation*, ed., O. Balci, Simulation Series Volume 19, No 1, 1987, pp.71-76.

Alan, M. and K. Kang, "Design of a Fast Food Restaurant Simulation Model," *Simulation: Modeling Manufacturing and Service Systems*, edited by the Institute of Industrial Engineers, 1987, pp.181-184.

Alvarez, E, M. Carrillo, S. Asfour, and K. Kang, "The Occupational Biomechanics Trainer: A Computerized Educational Tool," *Trends in Economics/Human Factors IV*, ed. 5.5. Asfour, 1987, pp.893-900.

Goldsman, D., K. Kang and R. G. Sargent, "Large and Small Sample Comparisons for Various Variance Estimators," *Proc. of 1986, Winter Simulation Conference*, 1986, pp.278-284.

Kang, K. and D. Goldsman, "The Correlation between Mean and Variance Estimators," *Proc. of 1985 Winter Simulation Conference*, 1985, pp.211-216.

Kang, K., R. Rodriguez and O. Adaniya, "Multilevel Facility Layout Design," *Proc. of 1985 Winter Simulation Conference*, 1985, pp.300-302.

A.W. McMasters, "Relation Between GDSS use and Group Task Complexity: An Experimental Study", *Proceedings of the 23rd Hawaii International Conference on System Sciences (HICSS)*, January 1990.

A.W. McMasters, "An Architecture for Distributed Knowledge based GDSS", *Proceedings of the IFORS-90*, June 1990, Athens, Greece

A.W. McMasters, "Multiple Criteria Decision Support Systems: Matching Methods to Domain Applications", *Proceedings of the IFORS-90*, June 1990, Athens, Greece

A.W. McMasters and F.R. Richards, "Wholesale provisioning models: Model development ", Technical Report NPS-55-83-026, Naval Postgraduate School, Monterey, CA 93943, Sept., 1983, 60 p.

A.W. McMasters, "A multi-period repair parts inventory model for a Navy repair depot", *ORSA/TIMS Bulletin*, no. 18, Sept., 1984, p. 247

A.W. McMasters and Dickens, C.J., "An inventory model for management of U.S. Coast Guard clothing facilities, Technical Report NPS-54-83-005, Naval Postgraduate School, Monterey, CA 93943, June, 1983, 84 p.

A.W. McMasters and Steinberg, J., "A technique for evaluating vendor bids for stock replenishment of a consumable item", Technical Report NPS-54-85-003, Naval Postgraduate School, Monterey, CA 93943, June, 1985, 76 p.

A.W. McMasters, "A repair parts inventory model for a naval air rework facility", Technical Report NPS-54-80-04, Naval Postgraduate School, Monterey, CA 93943, May, 1980, 39 p.

A.W. McMasters, "Models for siting repair parts inventories in support of a naval air rework facility", Naval, Technical Report NPS-55-81-011, Naval Postgraduate School, Monterey, CA 93943, April, 1981, 62 p.

A.W. McMasters, "Budgeting for repairable secondary items at the Naval Electronics Systems Command", Technical Report NPS-54-78-007, Naval Postgraduate School, Monterey, CA 93943, 1978, 41 p.

T.P. Moore, "Modeling multiple repairable equipment and logistic systems", *Society of Logistics Engineers*, 1985, pp. 1-8

T.P. Moore, Agee, M.H., Brammer, K.W., Fabrycky, W.J. and Malmborg, C.J., "Predicting life cycle cost and maintenance requirements", *Federal Acquisition Research Symposium*, Fort Belvoir, VA, 1985, pp. 321-325

T.P. Moore, "Optimal design and operation of logistic systems comprised of finite populations of repairable equipment", *The Annals of the Society of Logistics Engineers*, vol. 1, no. 1, Oct., 1986, pp. 86-90

T.P. Moore, J.D. Clarke. "Problems Identified in the RAN Initial Provisioning Model", *Journal of the Royal Australian Navy Supply Support Organization*, Vol. 3, No. 4, pp. 41-51, June 1990.

Boaz Ronen and Dan Trietsch, "A Decision Support System for Planning Large Projects", *Operations Research*, 36, 1988, pp. 882-890.

Boaz Ronen and Dan Trietsch, "Optimal Scheduling of Purchasing Orders for Large Projects", *European Journal of Operational Research* (to appear).

Dan Trietsch and Gabriel Y. Handler, "On Highway Fuel and Time Expenditures", *Transportation Science* 19, 1985, pp. 293-307.

Dan Trietsch, "A Family of Methods for Preliminary Highway Alignment", *Transportation Science* 21, 1987, pp. 17-25.

Dan Trietsch, "Comprehensive Design of Highway Networks", *Transportation Science* 21, 1987, pp. 26-35.

Dan Trietsch, "Augmenting Euclidean Networks--The Steiner Case", *SIAM Journal of Applied Mathematics* 45, 1985, pp. 855-860.

Dan Trietsch and Gabriel Y. Handler, "The Gilbert and Pollak Conjecture--A Generalization", *NETWORKS* 15, 1985, pp. 365-380.

Dan Trietsch, "Connecting Euclidean Networks--The Steiner Case", *NETWORKS* 20, 1990, pp. 93-108.

Dan Trietsch and Frank K. Hwang, "An Improved Algorithm for Steiner Trees", *SIAM J. Appl. Math.* 50, 1990, pp. 244-263.

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N.R. Dilliard, "A Cross-Sectional Analysis of COMNAVTELCOM Reports of Command Inspections of Naval Communications Stations," M.S. in Telecommunications Systems Management, March 1990, Advised by D.C. Boger

M. Sedlacek, "An Analysis of Strategic Sealift Communications," M.S. in Telecommunications Systems Management, March 1990, Advised by D.C. Boger

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Gottlick, R.C. and Victoriano, E.A., "Optical Storage System for Shipboard Supply Documents, Master of Science in Management", December 1989, Advised by T. P. Moore and B. A. Frew.

Naber, J.P., "Allowance Type Code Seven Material: An Analysis of the Current Disposal System", Master of Science in Management, December 1989, Advised by T.P. Moore and T. H. Hoivik.

(d) Upper Division Courses Appropriate to the Integrated Logistics Field and its Minors

MN 3301 System Acquisition and Project Management (4-0)

MN 3372 Material Logistics (4-0)

MN 3373 Transportation Management I (4-0)

MN 3374 Production Management: A TQM Perspective (4-0)

MN 3375 Material Handling Systems Design (4-0)

MN 3377 Inventory Management (4-0)

MN 4310 Logistics Engineering (4-0)

MN 4373 Transportation Management II (4-0)

MN 4376 Seminar in Material Logistics (4-0)

MN 4377 TQM/TQL: Philosophy, Theory, Tools (4-0) [NEW COURSE]

Deming's 14 points (philosophy and basic theory). The 7 basic graphic tools (flow charts, cause-and-effect diagrams, Pareto charts, histograms, scatter diagrams, run charts and control charts), which help analyze generic processes. Advanced theories and techniques, designed to address quality issues of specific types, including SMED (single minute exchange of die, or setup reduction), Poka-Yoke (mistake proofing), Synchronized Operations (also known as Just-In-Time), Statistical Experimental Methods for off-line quality improvement such as Taguchi Methods, Total Preventive Maintenance, and Group Technology. We'll discuss how these methods, developed predominantly in the manufacturing environment, can be used in services.

**PREREQUISITES:** Any basic course in probability and statistics, or instructor approval.

(e) Additional Graduate Courses Suggested to Support Doctoral Work in Logistics

MN 4107 Logistics Policy Analysis (4-0)

Analysis of Department of Defense logistics policy since the McNamara era. Defense Management Review Reports. Strategic planning for peacetime and contingencies. Combat logistics and lessons learned from Desert Shield/Desert Storm.

**PREREQUISITES:** All logistics courses required for the 827 curriculum.

**MN 4320 Life Cycle Cost Models (4-0)**

A critical review of current life cycle cost models in use by the various services of the Department of Defense and by major companies in the private sector, such as aircraft manufacturers. Assumptions and formulas for each model element. Learning curves. Emphasis on the reliability and maintainability aspects of weapon systems.

**PREREQUISITES:** OS 3006, MN 4310

**MN 4374 Advanced Operations Management (4-0)**

Advanced techniques in scheduling (including projects, purchasing under stochastic lead times, hub operations such as airports), project management with limited resources, line balancing, capacity planning, location, mistake proofing, setup reductions and other lead time and inventory reduction methods.

**PREREQUISITES:** MN 3374

**MN 4375 Materials Handling Models (4-0)**

Models to optimize the use of material handling equipment. Work measurement and quality control. Algorithms for placing material in storage in both manual and automated warehouses. Scheduling of picking. Design of conveyor systems. Fixed and random flow systems. System simulation and evaluation. **PREREQUISITES:** MN 3374, MN 3375.

**MN 43xx Modeling REALM Systems (4-0)**

An examination of models, modeling techniques, and model optimization processes for repairable equipment and logistic-maintenance (REALM) systems. Both analytic and simulation models will be studied. Models that may be studied include the METRIC family of models, TIGER, LCOM, MREAL1, and others.

**PREREQUISITES** MN 4310, MN 3372, OS 3001, OA 4201

**MN 43xx Logistics Information Systems Design (4-0)**

The design, integration, and use of information systems in the management of logistic processes and systems will be studied, and their good and bad features examined. Principles of the design and integration of these information systems will be studied. The Navy's UICP, UADPS-SP and SUADPS systems will be studied to illustrate the various principles and problems involved in logistics information systems design.

**PREREQUISITE** MN 4182

**MN 43xx Logistics Risk Analysis (4-0)**

Techniques of analysis of logistics projects involving trade-off between risks and benefits. Economic analysis of failure consequences of low probability/high impact events such as nuclear accident. Emphasis on applications to weapon systems analysis.

**MN 43xx Transportation Systems Modeling (4-0)**

In-depth study of transportation systems as mathematical networks, including the classical transportation problem. Application of these concepts to scenarios evaluating system effects of alternative rate structures, freight consolidation, and facility consolidation using actual cases.

**PREREQUISITE:** OA 4202

**(f) Sample Ph.D. Program in Logistics/Transportation/Operations**

**First Year:** Remove any deficiencies in meeting the MS program in Administrative Sciences. Take additional Integrated Logistics courses, and a course in research methods (e.g. OA 4101). Pass preliminary exam and have doctoral committee appointed; begin work toward minor requirements in Management Information Systems, Operations Research, Computer Science, Behavioral Sciences, Mathematics or Engineering according to interest.

At the end of the first year, a diagnostic review is conducted by members of the academic unit in the student's major field. The review considers such indicators of scholastic achievement as performance in research courses and doctoral courses deemed appropriate by the examining faculty. The review culminates in a formal report to the Chairman of the Departmental Ph.D. Committee, and includes a recommendation as to whether the student should continue in the program, and if so, recommendations regarding how the student can improve his or her performance. A professor from the student's chosen academic unit then discusses the report with the student, making a careful assessment of demonstrated strengths and weaknesses in order to help the student to progress more effectively.

**Second Year:** Finish minor requirements, select dissertation supervisor. Prepare for Qualifying Examination. Take Qualifying Examination near the middle of the second year. The written Qualifying Examination will cover 4 graduate level courses to be chosen by the student with the approval of the student's Ph.D. Committee.

**Third Year:** Concentrate primarily on dissertation research, with perhaps a course or two related to the dissertation. The dissertation culminates the student's academic endeavors. Working closely with faculty members from the student's committee during all phases of preparation, the student is expected to present a dissertation of substantial contributions. The dissertation should make a significant contribution to the advancement of knowledge in the Integrated Logistics field. It should be of sufficient originality and quality to merit publication, either whole or in part, in a refereed professional publication.

The dissertation is defended at a final oral examination. It must be completed and accepted within seven and a half years from the date of entry into the program. The dissertation defense is held before an student's Ph.D. committee. The committee is composed of at least two IL faculty members and two faculty members from other areas related to the dissertation topic. While any interested faculty member may attend the examination and participate in the discussion, only the members of the student's Ph.D. committee vote on the dissertation approval or disapproval.

**APPENDIX D**  
**INTRODUCTION TO THE DEPARTMENT OF**  
**ADMINISTRATIVE SCIENCES PERSONNEL,**  
**ACADEMIC/RESEARCH PROGRAMS, AND RECENT**  
**DEVELOPMENTS/ACTIVITIES**

DEPARTMENT OF ADMINISTRATIVE SCIENCES  
NAVAL POSTGRADUATE SCHOOL  
MONTEREY, CALIFORNIA 93943

PROFESSOR DAVID R. WHIPPLE, JR., CHAIRMAN

**I. DEPARTMENT OF ADMINISTRATIVE SCIENCES' SUMMARY  
OF FACULTY AND STAFF**

Regular Faculty	42
Adjunct Faculty	18
Emeritus Faculty	3
Instructors	10
Support Staff	17

## **II. DEPARTMENT FACULTY**

(Extracted from Naval Postgraduate School Catalog, 1991)

### **A. REGULAR FACULTY**

**WHIPPLE, DAVID R.**, Professor of Economics and Policy Analysis, 1971 and Chairman

Ph.D., University of Kansas, 1971

**ABDEL-HAMID, TAREK**, Associate Professor of Management Information Systems, 1986

Ph.D., MIT Sloan School of Management, 1984

**BARRETT, FRANK**, Assistant Professor, 1990

B.A., University of Notre Dame, 1975

M.A., University of Notre Dame, 1977

Ph.D., Case Western Reserve University, 1989

**BHARGAVA, HEMANT**, Assistant Professor of Management Information Systems, 1989

Ph.D., The Wharton School, University of Pennsylvania, 1990

**BOGER, DAN C.**, Associate Professor of Economics, 1979

Ph.D., University of California at Berkeley, 1979

**BUI, TUNG X.**, Associate Professor of Management Information Systems, 1984

Ph.D., New York University, 1985

**CARRICK, PAUL M.**, Associate Professor of Economics, 1969

Ph.D., University of California at Berkeley, 1956

**DOLK, DANIEL R., Associate Professor of Management Information Systems, 1982 and Associate Chairman of Instruction**

**Ph.D., University of Arizona, 1982**

**DOYLE, RICHARD, Associate Professor of Public Budgeting, 1990**

**Ph.D., University of Washington, 1982**

**EITELBERG, MARK J., Associate Professor of Public Administration, 1982**

**Ph.D., New York University, 1979**

**ELSTER, RICHARD S., Dean of Instruction, Professor of Administrative Sciences, 1969**

**Ph.D., University of Minnesota, 1967**

**EUSKE, KENNETH J., Associate Professor of accounting, 1978**

**Ph.D., Arizona State University**

**EVERED, ROGER D., Professor of Management, 1979**

**Ph.D., University of California at Los Angeles, 1973**

**FREMGAN, JAMES M., Professor of Accounting, 1965**

**Ph.D., Indiana University, 1961**

**FREW, BARRY A., Adjunct Professor of Information Systems, 1984**

**M.S., Naval Postgraduate School, 1984**

**HENDERSON, DAVID R., Associate Professor of Economics, 1984**

**Ph.D., University of California at Los Angeles, 1976**

**HORTON, FENN C., Associate Professor of Economics, 1964**

**Ph.D., Claremont Graduate School, 1968**

JONES, CARL R., Professor of Information and Telecommunications Systems,  
1965

Ph.D., Claremont Graduate School, 1965

JONES, LAWRENCE R., Professor of Financial Management and Budgeting,  
1987

Ph.D., University of California at Berkeley, 1977

KAMEL, MAGDI N., Assistant Professor of Management of Information  
Systems, 1988

Ph.D., University of Pennsylvania, The Wharton School, 1988

LAMM, DAVID V., Associate Professor of Acquisition and Contract  
Management, 1978

DBA, George Washington University, 1976

LIAO, SHU S., Professor of Accounting, 1977

Ph.D., University of Illinois, 1971

McCAFFERY, JERRY L., Professor of Public Budgeting, 1984

Ph.D., University of Wisconsin, 1972

McMASTERS, ALAN W., Professor of Operations Research and Administrative  
Sciences, 1965

Ph.D., University of California at Berkeley, 1966

MEHAY, STEPHEN L., Professor of Labor Economics, 1985

Ph.D., University of California at Los Angeles, 1973

MOORE, THOMAS P., Assistant Professor of Management Science, 1986

Ph.D., Virginia Polytechnic Institute and State University, 1985

MOSES, DOUGLAS, O., Associate Professor of Accounting, 1985

Ph.D., University of California at Los Angeles, 1983

RAMESH, BALASUBRAMANIAM, Assistant Professor of Information Systems,  
1990

Ph.D., New York University, 1990

ROBERTS, BENJAMIN J., Associate Professor of Management and Human  
Resource Development, 1985

BS, Louisiana State University, 1970

MA, Louisiana State University, 1972

Ph.D., Pennsylvania State University, 1977

ROBERTS, NANCY C., Associate Professor of Strategic Management, 1986

Ph.D., Stanford University, 1983

SAN MIGUEL, JOSEPH C., Professor of Accounting, 1982

Ph.D., University of Texas, 1972

SCHNEIDEWIND, NORMAN F., Professor of Information Sciences, 1971

DBA, University of Southern California, 1966

SENGUPTA, KISHORE, Assistant Professor of Management Information  
Systems, 1989

Ph.D., Case Western Reserve University, 1990

SOLNICK, MICHEAL C., Associate Professor of Labor Economics, 1985

Ph.D., Cornell University, 1973

SUCHAN, JAMES E., Associate Professor of Management Communications,  
1986

BA, State University of New York at Buffalo, 1971

MA, State University of New York at Buffalo, 1973

Ph.D., University of Illinois, 1980

SUH, MYUNG, Assistant Professor of Management Information Systems, 1989

Ph.D., University of Rochester, 1989

THOMAS, GAIL F., Associate Professor of Management Communications, 1989

BA, Northern Arizona, 1976

MA, Arizona State University, 1979

Ph.D., Arizona State University, 1986

THOMAS, GEORGE W., Associate Professor of Economics, 1978

Ph.D., Purdue University, 1971

THOMAS, KENNETH W., Professor of Administrative Sciences, 1987

Ph.D., Purdue University, 1971

TRIETSCH, DAN, Associate Professor of Operations Management and Logistics,  
1987

Ph.D., Tel Aviv University, 1983

WEITZMAN, RONALD A., Associate Professor of Psychology, 1971

Ph.D., Princeton University, 1959

ZVIRAN, MOSHE E., Assistant Professor of Management Information Systems,  
1988

Ph.D., Tel Aviv University, 1988

ZWEIG, DANI, Assistant Professor of Information Systems, 1990

Ph.D., Carnegie Mellon University, 1989

## **B. ADJUNCT FACULTY**

**CRAWFORD, ALICE**, Adjunct Professor of Psychology, 1988

MA, San Diego State University, 1973

**DRESSER, CYNTHIA H.**, Adjunct Professor of English as Second Language (ESL), 1989

MS, Monterey Institute of International Studies, 1987

**GATES, WILLIAM R.**, Adjunct Professor of Economics, 1988

Ph.D., Yale University, 1984

**GORMAN, LINDA**, Adjunct Professor of Economics, 1988

University of Pittsburg, 1982

**HAGA, WILLIAM J.**, Adjunct Professor of Management Information Systems, 1988

Ph.D., University of Illinois, 1972

**HOCEVAR, SUSAN P.**, Adjunct Professor of Organization and Management, 1990

BA, University of Rochester, 1970

MA, Cornell University, 1975

Ph.D., University of Southern California, 1990

**HOIVIK, THOMAS**

**KANG, KEEBOM**, Adjunct Professor of Logistics, 1988

Ph.D., Purdue University, 1984

**McCAFFREY, MARTIN J.**, Adjunct Professor of Contracting and Acquisition and Management Information Systems, 1988

MS, Naval Postgraduate School, 1985

MEANS, TOM, Adjunct Professor

SESSIONS, STERLING D., Adjunct Professor, 1989

Ph.D., Harvard University, 1962

SRIDHAR, SURESH

TERASAWA, KATCHAN, Adjunct Professor of Economics and Policy  
Analysis, 1989

Ph.D., University of Kansas, 1971

WARGO, LINDA

ZAMBO, LESLIE J., Adjunct Professor of Financial Management, 1986

Ph.D., University of Texas, 1981

ZIRSCHKY, STEPHEN

### **C. EMERITUS FACULTY**

**CREIGHTON, JOHN W., Professor Emeritus, 1967**

**Ph.D., University of Michigan, 1954**

**KLINE, MELVIN B., Professor Emeritus, 1970**

**Ph.D., University of California at Los Angeles, 1966**

**SENGER, JOHN D., Professor Emeritus, 1957**

**Ph.D., University of Illinois, 1965**

### **III. SUPPORT STAFF**

EVANS, JAN, Administrative Officer  
BONNEY-BRACEY, BRENDA, Editorial Assistant  
BOYLE, LYNN, Education Technician  
BURNS, CHAN, Research Technician  
HAGA, CHELSEA, Student Aide-Duplication  
HARTER, GWEN, TQL Secretary  
ISHII, LIANE, Student Aide-TQL  
JOYCE, BEVERLY, Typist  
KOCHER, KATHY, Labor Economist  
LINDSAY, CARYL, Computer Specialist  
LONG, EVA, Typist and Library Support  
POTTER, MELISSA, Research Associate  
ROULEAU, BARBARA, Research Technician  
SAHLMAN, LEON, Computer Specialist  
SALIB, HODA, Chair Secretary  
SWEENEY, JANE, Procurement  
TSUCHIDA, ROSE, Travel Clerk

#### **IV. ADMINISTRATIVE SCIENCES COURSE OFFERINGS**

(Extracted from Naval Postgraduate School Catalog, 1991)

##### **Administrative Science Courses**

AS1601	TEAM BUILDING SEMINAR: CONTEMPROARY INTERNATIONAL RELATIONS (4-0)
AS1701	COMMUNICATIONS SKILLS FOR INTERNATIONALS: I (4-0)
AS1901	INTRODUCTION TO AMERICAN BUSINESS PRACTICES (4-0)
AS2701	COMMUNICATIONS SKILL FOR INTERNATIONALS: II (4-0)
AS3610	ECONOMIC ANALYSIS AND OPERATIONS RESEARCH (4-0)
AS3611	PLANNING AND CAPITAL ALLOCATION IN THE DEPARTMENT OF DEFENSE (4-1)
AS4613	THEORY OF SYSTEMS ANALYSIS (4-0)

##### **Communications Management Courses**

CM0001	SEMINAR FOR TELECOMMUNICATIONS SYSTEMS MANAGEMENT STUDENTS (0-2) (NO CREDIT)
CM0810	THESIS RESEARCH FOR TELECOMMUNICATIONS SYSTEMS MANAGEMENT STUDENTS (0-0)
CM3001	MICROECONOMICS FOR TELECOMMUNICATIONS (4-0)
CM3002	ECONOMIC EVALUATION OF TELECOMMUNICATIONS SYSTEMS (4-0)
CM3112	NAVY TELECOMMUNICATIONS SYSTEMS (4-0)
CM4003	SEMINAR IN TELECOMMUNICATIONS SYSTEMS MANAGEMENT (VARIABLE HOURS 1-0 TO 4-0) (V-0)
CM4925	TELECOMMUNICATIONS SYSTEMS, INDUSTRY AND REGULATION (4-0)

##### **Information Science Courses**

IS0001	SEMINAR FOR COMPUTER SYSTEMS MANAGEMENT (NO CREDIT) (0-2)
IS0123	COMPUTER SKILLS DEVELOPMENT (NO CREDIT) (0-2)
IS0810	THESIS RESEARCH FOR COMPUTER SYSTEMS MANAGEMENT STUDENTS (0-0)
IS1004	INTRODUCTION TO PC DATABASE SYSTEMS (0-1)
IS2000	INTRODUCTION TO COMPUTER MANAGEMENT (3-1)
IS3000	DISTRIBUTED COMPUTER SYSTEMS (4-0)
IS3020	SOFTWARE DESIGN (3-2)
IS3100	ANALYSIS OF MICROCOMPUTERS AND MICROPROCESSORS (4-0)
IS3170	ECONOMIC EVALUATION OF INFORMATION SYSTEMS (4-0)
IS3183	MANAGEMENT INFORMATION SYSTEMS (4-0)
IS3220	COMPUTER CENTER MANAGEMENT (3-2)
IS3502	COMPUTER NETWORKS: WIDE AREA/LOCAL AREA (4-0)
IS3503	MICRO-COMPUTER NETWORKS (3-2)
IS4182	INFORMATION SYSTEMS MANAGEMENT (4-0)

IS4183	APPLICATIONS OF DATABASE MANAGEMENT SYSTEMS (4-1)
IS4184	INFORMATION RESOURCE MANAGEMENT IN DON/DOD (4-0)
IS4185	DECISION SUPPORT SYSTEMS (4-1)
IS4200	SYSTEM ANALYSIS AND DESIGN (4-0)
IS4300	SOFTWARE ENGINEERING AND MANAGMENT (4-0)
IS4320	DATABASE AND INFORMATION RESOURCE MANAGEMENT FOR C3 (4-0)
IS4502	TELECOMMUNICATIONS NETWORK (4-0)
IS4800	DIRECTED STUDY IN ADVANCED INFORMATION SYSTEMS (VARIABLE HOURS) (V-0)
IS4925	DIRECTED STUDY IN INFORMATION SYSTEMS (VARIABLE HOURS) (V-0)

### Organization and Management Courses

MN0001	SEMINAR FOR ADMINISTRATIVE SCIENCE STUDENTS (NO CREDIT) (0-2)
MN0810	THESIS RESEARCH FOR ADMINISTRATIVE SCIENCE STUDENTS (0-0)
MN2031	ECONOMIC DECISION MAKING (4-0)
MN2131	ECONOMIC DECISION MAKING (4-0)
MN2111	SEMINAR IN MANPOWER, PERSONNEL AND TRAINING ISSUES I (0-2)
MN2112	SEMINAR IN MANPOWER, PERSONNEL AND TRAINING ISSUES II (0-2)
MN2113	SEMINAR IN MANPOWER, PERSONNEL AND TRAINING ISSUES III (0-2)
MN2150	FINANCIAL ACCOUTING (4-0)
MN2155	ACCOUNTING FOR MANAGEMENT (4-0)
MN2302	SEMINAR FOR ACQUISITION AND CONTRACTING STUDENTS (0-2)
MN2303	SEMINAR FOR PROGRAM MANAGEMENT STUDENTS (0-2)
MN3105	ORGANIZA ION AND MANAGEMENT (4-0)
MN3111	PERSONNE MANAGEMENT PROCESS (4-0)
MN3123	MILITARY SOCIOLOGY (4-0)
MN3140	MICROECONMIC THEORY (4--0)
MN3161	MANAGERIAL ACCOUNTING (4-0)
MN3172	PUBLIC POLICY PROCESSES (4-0)
MN3301	SYSTEMS ACQUISITION AND PROJECT MANAGEMENT (4-0)
MN3303	PRINCIPLES OF ACQUISITION AND CONTRACTING (4-0)
MN3304	CONTRACT PRICING AND NEGOTIATIONS (5-2)
MN3305	CONTRACT ADMINISTRATION (3-0)
MN3307	ADP ACQUISITION (4-0)
MN3312	CONTRACT LAW (3-0)
MN3333	MANAGERIAL COMMUNICATION SKILLS (4-0)
MN3334	MANAGERIAL COMMUNICATIONS LAB FOR INTERNATIONAL STUDENTS (0-1)
MN3371	CONTRACTS MANAGEMENT AND ADMINISTRATION (4-0)
MN3372	MATERIAL LOGISTICS (4-0)
MN3373	TRANSPORTATION MANAGEMENT I (4-0)
MN3374	PRODUCTION/OPERATIONS MANAGEMENT (4-0)

MN3375	MATERIAL HANDLING SYSTEMS DESIGN (4-0)
MN3377	INVENTORY MANAGEMENT (4-0)
MN3760	MANPOWER ECONOMICS I (4-0)
MN3801	TECHNOLOGY TRANSFER (4-0)
MN3900	READINGS IN ADMINISTRATIVE SCIENCE (4-0)
MN3902	MPT COMPUTER SKILLS ENHANCEMENT (0-2)
MN4105	MANAGEMENT POLICY (4-0)
MN4106	MANPOWER/PERSONNEL POLICY ANALYSIS (4-0)
MN4110	MULTIVARIATE MANPOWER DATA ANALYSIS I (4-0)
MN4111	MULTIVARIATE MANPOWER DATA ANALYSIS I (5-1)
MN4112	PERSONNEL TESTING AND SELECTION (4-0)
MN4115	TRAINING FOUNDATIONS AND MANAGEMENT (4-0)
MN4117	JOB ANALYSIS AND PERSONNEL TRAINING (4-0)
MN4119	SEMINAR IN MANPOWER ANALYSIS (V-0)
MN4121	ORGANIZATION THEORY (4-0)
MN4122	PLANNING AND CONTROL: MEASUREMENT AND EVALUATION (4-0)
MN4125	MANAGING PLANNED CHANGE IN COMPLEX ORGANIZATIONS (4-0)
MN4127	SEMINAR IN ORGANIZATION BEHAVIOR (V-0)
MN4145	POLICY ANALYSIS (4-0)
MN4151	INTERNAL CONTROL AND FINANCIAL AUDITING (4-0)
MN4161	MANAGEMENT CONTROL SYSTEM (4-0)
MN4162	COST ACCOUNTING (4-0)
MN4163	ANALYTICAL TECHNIQUES FOR FINANCIAL CONTROL AND PLANNING (4-0)
MN4301	CONTACTING FOR MAJOR SYSTEMS (4-0)
MN4302	PUBLIC EXPENDITURE POLICY AND ANALYSIS (4-0)
MN4307	PROGRAM MANAGEMENT POLICY AND CONTROL (4-0)
MN4310	LOGISTICS ENGINEERING (4-0)
MN4371	ACQUISITION AND CONTRACTING POLICY (4-0)
MN4372	SEMINAR IN ACQUISITION AND CONTRACT MANAGEMENT (V-0)
MN4376	SEMINAR IN MATERIAL LOGISTICS (4-0)
MN4500	PRODUCTIVITY ANALYSIS (4-0)
MN4650	THE MILITARY HEALTH CARE DELIVERY SYSTEM AND ANALYSIS (4-0)
MN4761	APPLIED MANPOWER ANALYSIS (4-0)
MN4900	READINGS IN ADMINISTRATIVE SCIENCE (V-0)
MN4904	MPT RESEARCH APPLICATIONS (0-2)
MN4942	THE STRUCTURE, CONDUCT AND PERFORMANCE OF THE DEFENSE INDUSTRIES (4-0)
MN4945	SEMINAR IN ECONOMICS (V-0)
MN4970	SEMINAR IN ADMINISTRATIVE SCIENCE (V-0)

## **V. PH.D. PROGRAM**

The Department of Administrative Sciences at the Naval Postgraduate School will award the degree of Doctor of Philosophy in Administrative Sciences as a result of meritorious and scholarly achievement in a particular field of administrative sciences ( organization and management, integrated logistics and operations management, and information technology. This program includes course work, written and oral examinations, research, and a written dissertation. A candidate must exhibit scholarly application to the entire course of study, achieve a high level of scientific advancement, and establish an ability for original investigation leading to the advancement of fundamental knowledge.

### **ADMISSION PROCEDURE**

A student seeking to become a candidate for this program must present evidence of having obtained a bachelors degree or its equivalent, no particular subject required, and of having excelled in previous academic works. Applicants are asked to provide personal essays; letters of recommendation; and the Graduate Management Admission Test (GMAT) scores or the Graduate Record Examination Test (GRE). Non-native English students must demonstrate proficiency in English.

### **PROGRAM OF STUDY**

Each student's Doctoral Committee to guide the student in designing a program suitable for his/her special interests and background to alert them to opportunities both within the Department of Administrative Sciences and other departments at NPS; and to monitor the student's progress.

#### **Core Program**

The doctoral program is based on a core of courses designed to provide the student with the broad knowledge and analytic skills necessary for advanced coursework and dissertation research. The core program develops the basic tools of quantitative methods, economics, management and accounting. Students must also demonstrate competence in computer usage as evidenced by prior coursework [IS0123 Computer Skills Development (4-0) Course equivalent] or experience. In the absence of such work, a student will be required to take core M.S. courses.

The core courses are as follows:

1. Quantitative Methods: Two 4-unit courses (e.g. OS 3101 Statistics Analysis for Management and either OS3006 Operations Research for Management or OS3004 Operations Research for Computer Systems Management).
2. Economics: Two 4-unit courses (e.g. MN2031 Economics Decision Making and MN3140 Microeconomic Theory).
3. Organization and Management: Two 4-unit courses (e.g. MN3105 Organization and Management and either MN4105 Management Policy or MN4125 Managing Planned Change in Complex Organizations).
4. Accounting and Financial Management: Two 4-unit courses (e.g. MN2150 Financial Accounting and MN3161 Managerial Accounting).
5. Two 4-unit research courses will be required. The following courses will be developed as a standard option. However, the student, with the approval of his/her doctoral committee may authorize alternative research courses more suited to the student's research program area.

MN4901 RESEARCH THEORY AND METHODS I (4-0)

MN4902 RESEARCH THEORY AND METHODS II (4-0)

Students who have taken the equivalent of these courses may waive one or more of these core requirements by the Departmental Ph.D. Committee.

## THE DEPARTMENTAL PH.D. COMMITTEE

The Departmental Ph.D. Committee has complete responsibility for the entire doctoral program. It is their duty to make recommendations for admission decisions, administering the preliminary examination, and overseeing the written part of the qualifying examination. The Ph.D. Committee shall monitor the progress of each student to ensure the student is on track towards the degree. Furthermore, the Ph.D. Committee is responsible for providing general guidance on the student's research program to all doctoral students.

A candidate shall apply to the Departmental Ph.D. Committee and shall ensure that all transcripts of previous post-secondary education and letters of recommendation are sent to the Committee. The Committee shall then recommend action to the Chairman of the Department of Administrative Sciences, who will formally admit the student into the doctoral program.

## **THE STUDENT'S DOCTORAL COMMITTEE**

Upon recommendation by the Departmental Ph.D. Committee, a Doctoral Committee for the student will be nominated by the Chairman of the Department of Administrative Sciences and approved by the Academic Council as per Academic Council Policy Manual, Section 250. The Committee shall consist of at least five members from three departments. This Committee shall consist of at least three members of the Department of Administrative Sciences and two members from other departments (including a member from the department which will administer the student's minor field of study). At least four members will have earned the doctorate and the Committee may contain no more than two members who have not earned the doctorate. The Chairman of the Department of Administrative Sciences shall designate one of the Administrative Sciences members as Chairman of the Doctoral Committee.

At the time that the above Committee is submitted for approval, or at a subsequent time no later than when the student is advanced to candidacy for the doctorate, the Chairman of the Department of Administrative Sciences shall designate, for the approval of the Academic Council, the member of the Student's Doctoral Committee who shall serve as Dissertation Supervisor. In accordance with Academic Policy Manual, Section 255, the Chairman of the Administrative Sciences Department, shall certify that the Dissertation Supervisor has been selected.

## **MAJOR AND MINOR FIELDS OF STUDY**

Upon admission, a student must indicate a major field of study in economics, financial management, logistics, management or management information systems. The student will be encouraged to select the minor field early in the student's program to ensure the student has adequate time to complete the requirements of the minor field of study and to coordinate the student's research for his minor field of study with his research for his major field of study. The minor field of study which may be in a department other than the Department of Administrative Sciences, such as National Security Affairs, Operations Research; Computer Science; Command, Control and Communications; Electrical and Computer Engineering. The student's selection of a minor field of study must be approved by the Student's Doctoral Committee. The criteria for satisfying the minor requirements are established by the department which offers the minor program.

## **THE QUALIFYING EXAMINATION**

After the student has successfully completed all requirements for the minor field and has essentially completed the major field, the student shall be given a qualifying examination. The qualifying examination will include two parts, a written part and an oral part.

The Departmental Ph.D. Committee will prepare and administer the written part of the examination. The examination will include an in-depth testing of the student's knowledge and understanding of the student's specific field of study and ability to conduct research. The examination will be at least six hours in length and given over a one to two day period. The results will be evaluated by the Department Ph.D. Committee. The Department Ph.D. Committee will recommend the student for either an oral examination, a re-examination of the written part within six months, or the termination of the student's program. The written part of the qualifying examination should be taken by the summer quarter of the student's third year.

The oral portion of the qualifying examination shall be an open examination conducted by the student's entire Doctoral Committee and will only be scheduled upon the student's successful completion of the written part. Additionally, the Academic Council and members of the Department of Administrative Sciences and the minor department will be invited. The oral examination shall be given as soon as possible, normally within one month after successful passage of the written part of the qualifying examination. The oral part of the qualifying examination must be successfully completed with four and a half years after the date of entry into the program.

The successful passage of both the oral portions of the qualifying examination requires the unanimous vote of the Student's Doctoral Committee. The results of the entire qualifying examination shall be reported to the Dean of Instruction within two weeks after the scheduled date of the oral examination. If the student does not successfully pass the qualifying examination on the first try, the student may petition his/her Doctoral Committee to take the examination a second time.

## **DISSERTATION RESEARCH**

The dissertation culminates the student's academic endeavors. Working closely with faculty members from his/her committee during all phases of preparation, the student is expected to present a dissertation of substantial

magnitude. The dissertation should make a significant contribution to the advancement of knowledge in the chosen field of study. It should be of sufficient originality and quality to merit publication, either in whole or in part, in a professional journal. It is the student's responsibility to identify a Dissertation Supervisor and begin research as soon as possible. The student's Dissertation Supervisor shall be a member, but not necessarily the chairman, of the student's Doctoral Committee.

## **ADVANCEMENT TO CANDIDACY**

The student's Doctoral Committee shall recommend that the Academic Council advance the student to candidacy after the completion of the following requirements:

- a. The student's Doctoral Committee is approved by the Academic Council.
- b. The student's Dissertation Supervisor is approved by the Academic Council.
- c. The requirements for the minor are successfully completed.
- d. The successful passage of the qualifying examination.
- e. The proposed dissertation subject is approved by the student's Doctoral Committee.

## **THE DISSERTATION DEFENSE**

The dissertation shall be defended at a final oral examination no sooner than six months after the advancement to candidacy and no earlier than one week after submission and acceptance of a draft of the student's dissertation by the student's Doctoral Committee. The Doctoral Committee shall schedule the final oral examination and invite members of the Academic Council, the Department of Administrative Sciences, and other interested members of the academic community to attend. While any interested faculty member may attend the examination and participate in the discussion, only those individuals who are members of the student's Doctoral Committee can vote on the dissertation. The examination will be conducted by the Chairman of the student's Doctoral Committee, and will consist of a presentation and defense of the dissertation. Successful passage of the examination requires a unanimous vote of the student's Doctoral Committee.

The results of the examination shall be reported to the Dean of Academic Administration not later than two weeks after the scheduled date of the examination. A student that fails the final oral examination may petition his/her Doctoral Committee for at most one re-examination.

## **TIME LIMIT**

The student must complete all degree requirements, including the writing and successful defense of the dissertation within five years after advancement to candidacy or six and a half years from the date of entry into the program.

## **VI. FACULTY CONTRIBUTIONS TO PH.D. PROGRAMS**

**T.K. Abdel-Hamid**

**1981-83      MIT**

- taught courses in Management of Information Technologies
- member of 2 dissertation committees

**D.C. Boger**

- present

- Served on Academic Council's Doctoral Committee for A.S.
- prepared and graded doctoral examinations
- member of 4 dissertation committees
- chaired of C3AG Doctoral Committee
- supervised 4 students in C3 minor

**T.X. Bui**

**1988-90      University of Fribourg, Switzerland**

- taught courses in systems analysis and design
- prepare and graded doctoral examinations
- member of 3 dissertation committees
- chaired 1 dissertation committee

**D.R. Dolk**

**1989-present      NPS**

**1990      Dalhousie University (external member)**

- member of 2 dissertation committees

Evered

1970-80      University of California at Los Angeles  
                 University of Illinois  
                 Penn State University

- taught courses in Organization and Management
- prepared and graded doctoral examinations
- member of 20 dissertation committees

W. Haga

1971-72      University of Illinois

- Chaired committee that prepared doctoral preliminary examinations

D. Henderson

1975-79      University of Rochester, Graduate School of Management.

- taught Economics courses
- prepared and graded doctoral examinations
- served on 3 dissertation committees

C. R. Jones

1970- present      NPS

- taught courses in Economics
- prepared and graded doctoral examinations
- member of 5 dissertation committees
- chaired 1 dissertation committee

L. Jones

1979-85      University of Oregon

- taught courses in business
- prepared and graded dissertation examinations
- member of 8 dissertation committees
- chaired 2 dissertation committees

S.S. Liao

1974-1977 University of New York - Buffalo

- taught courses in accounting
- prepared and graded doctoral examinations

D. Lamm

1986-88 Golden State University

- member of 1 dissertation committee
- chaired 1 dissertation committee

A.W. McMasters

1968-1974 NPS

- taught courses in Operations Research and Operations Analysis
- prepared and graded doctoral examinations
- member of 5 dissertation committees

S. Mehay

1982-83 University of Oregon

1975-77 Concordia University in Montreal

- taught courses in Public Finance
- prepared and graded doctoral examinations
- member of 5 dissertation committees
- chaired 2 dissertation committees

B.J. Roberts

1977-81 The University of Florida

- taught courses in Social Psychology and Industrial/Organizational Psychology
- prepared and graded doctoral examinations
- served on 15 dissertation committees

N.C. Roberts

1982-85      University of Minnesota, School of Business.

- taught courses in Theory Construction
- member of 1 dissertation committee
- chaired 1 dissertation committee

J. San Miguel

1975-81      Harvard Business School

1972-74      New York University

- taught courses in accounting and administrative systems
- prepared and graded doctoral examinations for:
  - the Administrative point of view committee 1974-81 at HBS
  - the Doctoral examinations in Accounting, Planning, and Accountability Systems committee 1977-81 at HBS
  - the Field Exams in Accounting 1972-74 at NYU
- member of 6 dissertation committees
- co-chaired 1 dissertation committee

N.F. Schneidewind

- present      NPS

- taught operations research and computer networking courses
- prepared and graded minor in exam in IS
- member of 1 dissertation committee

K. Sengupta

1988          Case Western Reserve University

- helped design and taught course in Management Information Systems

J. Suchan

1984-85      University of Alabama

- prepared and graded doctoral examinations

**M. Suh**

**1987-88      University of Rochester**

- taught courses in Mathematical Statistics

**K.W. Thomas**

**1969-86      University of California at Los Angeles**

**Temple University**

**University of Pittsburgh**

- extensive teaching in experience in Organization and Management
- prepared and graded doctoral examinations
- member of 15 dissertation committees
- chaired 4 dissertation committees
- Extensive administrative experience
  - Director of Ph.D. program at University of Pittsburgh 1984-86
  - Member of Departmental Ph.D. Admissions Committee at  
UCLA
  - Member of Ph.D. Admissions Committee at University of  
Pittsburgh
  - Chairman of Ph.D. Policy Committee for Department of  
Industrial Relations and Organization Behavior, 1978-81
  - Member of Internal Evaluation Committee for Ph.D. Program at  
Temple University, 1980-81
  - Chairman of Doctoral Research Paper Review Committee,  
Graduate School of Management, UCLA, 1973-74

R. Weitzman

1962-71      University of Southern California

- taught many doctoral courses
- prepared and graded doctoral examinations
- member of several dissertation committees
- chaired 6 dissertation committees

M. Zviran

1988          Tel Aviv University

- prepared and graded doctoral examinations

## **VII. ADMINISTRATIVE SCIENCES LABORATORIES**

The Department of Administrative Sciences and NPS provide several computing resources to support research by Ph.D. candidates. These resources include:

- the NPS mainframe computer;
- three micro-computer laboratories with local area networks dedicated to the Department of Administrative Science for instructional and research purposes;
- links to other data centers and computers through several networks such as DDN INTERNET, BITNET and the MILNET;
- specialized software to conduct research and development of expertsystems, decision support systems, statistical analysis and database management systems;

In addition to the above computing resources, the NPS Mair Library with its vast inter-library loan system currently available to NPS students and faculty will provide outstanding support for Ph.D. candidates in Administrative Sciences. In addition to the Main Library, the Computer Center provides an excellent technical library. The current selection of books and journals already on campus will provide the Ph.D. candidate with ample material to support research in all areas of Administrative Sciences. The Department of Administrative Sciences will work in cooperation with the Main Library to ensure continued acquisition of vital research material to maintain suitability for the Administrative Sciences Ph.D. program.

## **VIII. PRINCIPAL AREAS OF RESEARCH**

### **Acquisition**

D.C. Boger  
S.S. Laio  
O.D. Moses  
W. Gates

### **Logistics and Transportation**

A.W. McMasters  
D. Trietsch  
T.P. Moore

### **Computers, Information, and Communication systems**

T.X. Bui  
M. Zviran  
W. Haga  
K. Sengupta  
T. K. Abdel-Hamid  
M. Suh  
N.F. Schneidewind  
D.F. Dolk  
D.R. Henderson  
M.N. Kamel  
M. Zviran  
B. Frew

### **Financial Management**

K. Euske  
L.R. Jones  
J. McCaffery  
J. San Miguel

## **Manpower, Personnel, and Training analysis,**

A. Crawford  
L. Solnick  
S. Mehay  
D. Henderson  
K.W. Thomas  
B.J. Roberts  
M. Eitelberg  
G.W. Thomas  
L. Gorman  
T.P. Moore  
K. Kocher  
L. Johnson  
R. Elster

## **Policy Analysis and Management.**

N.C. Roberts  
G.F. Thomas  
W. Gates  
K. Teraszwa  
J. Suchan  
San Miguel  
D.R. Henderson  
K.W. Thomas  
B.J. Roberts

## IX. FACULTY RESEARCH SUMMARY FOR 1989

<u>Title</u>	<u>Principle Investigator</u>	<u>Sponsor</u>
ENHANCING THE PORTABILITY OF QUANTITATIVE SOFTWARE ESTIMATION MODELS	T.K. Abdel-Hamid	NPS Research Council
INVESTIGATING THE INCORPORATION OF EXPERT SYSTEMS TECHNOLOGY INTO SYSTEM DYNAMICS SIMULATION MODELING	Abdel-Hamid	NPS Research Council
INCORPORATING EXPERT SYSTEMS TECHNOLOGY INTO A SYSTEM DYNAMICS COST ESTIMATION MODEL FOR SOFTWARE DEVELOPMENT	Abdel-Hamid	Naval Center for Cost Analysis
ANALYSIS OF THE MANAGEMENT CONTROL AND INFORMATION SYSTEM IMPLICATIONS OF RAMP	Dolk Euske	NAVSUP
A DECISION SUPPORT SYSTEM FOR EMERGENCY COMMUNICATIONS	Dolk Frew	National Communications Systems
THE EFFECTS OF DIFFERENT PERSONNEL PROCUREMENT SYSTEMS ON DEFENSE MANPOWER QUALITY	Eitelberg	Office of the Assistant Secretary of Defense
DESIGN AND EVALUATION OF MANAGEMENT SYSTEMS FOR NAVAL INDUSTRIAL IMPROVEMENT	Evered San Miguel	Under Secretary of the Navy, Naval Industrial Improvement Program
DATA COMMUNICATIONS SUPPORT Command	Frew	Naval Data Automation

A MODEL OF THE PRINCIPAL AGENT RELATIONSHIP IN THE DEPARTMENT OF DEFENSE ACQUISITION PROCESS	Gates	NPS Research Council
ASSESSING THE EFFECTIVENESS OF OFFICE AUTOMATION: SACONS IN THE NAVY	Haga / Davis / Murphy	None
PERSONALITY TYPE AND COMPUTER USAGE	Haga	None
INFORMATION SYSTEM EFFECTIVENESS: RESEARCH DESIGNS FOR CASUAL INFERENCE	Haga / Zviran / Mustofa	None
COGNITIVE PASSWOPDS	Zviran / Haga / Huisey	NPS Research Council
AN ECONOMIC ANALYSIS OF NATIONAL SERVICE	Henderson  (Manpower)	Deputy Chief of Naval Operations
HOW TO ACCOUNT FOR INFLATION WHEN TAKING PRESENT VALUES	Henderson  (Manpower)	Deputy Chief of Naval Operations
THE PERVERSE EFFECTS OF VARIABLE OIL IMPORT FEE	Henderson	None
ARE WE ALL SUPPLY-SIDERS NOW? THE EMERGING CONSENSUS ON MARGINAL TAX RATES	Henderson	None
THE SUPPLY-SIDE TAX REVENUE EFFECTS OF THE CHILD-CARE TAX	Henderson	None
AN EMPIRICAL STUDY OF VIEW MATERIALIZATION STRATEGIES	Kamel	NPS Research Council
ANALYSIS OF FINANCIAL MANAGEMENT ISSUES AT THE FLEET LEVEL	L.R. Jones / Euske	Commander Naval Air Force, U.S. Pacific Fleet

CONGRESSIONAL CONTROL OF NAYY BUDGET EXECUTION	L.R. Jones	Office of the Comptroller, Office of Budgets and Reports (NCB-1) DON
BUDGETING AND ACCOUNTING AT THE CINCPACFLT LEVEL	J. L. McCaffery / Euske	Comptroller, CINCPACFLT
RESYSTEMIZATION MODELING SUPPORT	McMasters  Office	Navy Fleet Material Support
STOCK POINT EXPERT SYSTEMS	McMasters	NAVSUP
ARMY RESERYE MIGRATION PROJECT	Mehay	U.S. Army Recruiting Command, Program Analysis and Evaluation Directorate
ARMY RECRUITING IN THE 21ST CENTURY	Mehay / Eitelberg	Army Recruiting Command, Program Analysis and Evaluation Directorate
SOFTWARE FOR U.S. ARMY TOE RESILIENCY SCREENING	Moore	U.S. Army Combat Developments Experimentation Center
ESTIMATING AND EXPLAINING THE COST OF HIGH-TECHNOLOGY SYSTEMS	Moses	Naval Sea Systems Command, Cost Estimating and Analysis Division
SOFTWARE PRODUCTIVITY ENHANCEMENT STUDY	Schneidewind / Abdel-Hamid	NAVMASSO
SOETT'ARE OUALITY METRICS	Schneidewind	IEEE Computer Society Standards Activity Board
DISTRIBUTED SYSTEM SOFTWARE DESIGN PARADIGM AND INTERNETWORKING	Schneidewind	None

ANALYSIS OF FIELD AGENTS WRITTEN COMMUNICATION SKILLS	Suchan	Defense Personnel Security Research and Education Center
USAR NURSE RETENTION/ATTRITION STUDY	G. W. Thomas / B. J. Roberts / Moore /	US Army Recruiting Command
USAR ENLISTMENT MOTNATIONS	G.W. Thomas / Gorman	U S Army Recruiting Command
MARKET ANALYSIS FOR THE YEAR 2000	G. W. Thomas / Solnick / Gorman / Johnson	US Army Recruiting Command
ESTIMATION OF OUALIFIED MILITARY AVAILABLE POPULATION INTERESTED IN ACTIVE ENLISTMENT FOR YEAR 2010	G. W. Thomas / Gorman	U S Army Recruiting Command
ESTIMATION OF USN OUALIFIED MILITARY AVAILABLE AND INTERESTED	G.W. Thomas / Gorman / Steiner	Office of Naval Research, Naval Recruit Command
BEHAVIORAL/ATTITUDINAL SURVEYS OF CIVILIAN PERSONNEL DEPARTMENT AND OF ENGINEERS AT THE NAVAL AVIONICS CENTER	K.W. Thomas / BJ. Roberts	Naval Avionics Center
NEAR-OPTIMAL TRANSFER LOTS FOR JOB SHOPS WITH SEVERAL DEPARTMENTS	Trietsch	NPS Research Council
PRIORITIZING SETUP REDUCTION EFFORTS IN NAVAL SHIPYARDS	Trietsch	NAVSEA
STRATEGIC MANAGEMENT FOR THE DEFENSE DEPARTMENT	Tritten / N.C. Roberts / Whitt	Director of Net Assessment (OSD/ NA)
APPLYING ANALYTICAL HIERARCHIES TO COMPUTER FAMILY SELECTION PROCEDURE	Zviran	NPS Research Council
EVALUATION OF USER AUTHENTICATION TECHNIQUES AS INFORMATION SYSTEMS SECURITY MECHANISMS	Zviran	NPS Research Council

IMPROVING SOFTWARE COST AND  
SCHEDULE ESTIMATION THROUGH  
THE NORMALIZATION OF  
HISTORICAL PROJECT STATISTICS

Abdel-Hamid

Naval Center  
for Cost Analysis

IMPACT OF COMPETITION ON  
WEAPON SYSTEM ACQUISITION

Boger

Naval Center for  
Cost Analysis

DATA AND METHODS FOR  
ESTIMATING COSTS OF  
AIRCRAFT MODIFICATIONS  
AND ALTERNATIVES

Boger / Liao

Naval Air  
Systems  
Command, Cost  
Analysis  
Division

## X. FACULTY RESEARCH SUMMARY FOR 1990

<u>Title</u>	<u>Principle Investigator</u>	<u>Sponsor</u>
RELIABILITY GOAL FOR MAJOR CALIBER AMMUNITION	Kang	Naval Weapon Support Center
COMPUTER-AIDED MODEL CONSTRUCTION	Bhargava	NPS Research Council
FLEET MIX PLANNING IN THE U.S. COAST GUARD	Bhargava	U.S. Coast Guard Patrol Boat Acquisition
Group		
REPRESENTATION AND MANIPLULATION OF SETS IN MATHEMATICAL MODELING	Bhargava	NPS Research Council
IMPACT OF COMPETION ON WEAPON SYSTEM ACQUISITION	Boger	Naval Center for Coat Analysis
DATA AND METHODS FOR ESTIMATING COSTS OF AIRCRAFT MODIFICATIONS AND DERIVATIVES	Boger / Liao	NPS Research Council
ANALYSIS OF THE MANAGEMENT CONTROL AND INFORMATION SYSTEM IMPLICATION OF RAMP	Dolk / Euske	Naval Supply Systems Command PML 5505
A DECISION SUPPORT SYSTEM FOR EMERGENCY TELECOMMUNICATIONS	Dolk	National Communications System
THE EFFECTS OF DIFFERENT PERSONNEL PROCURMENT SYSTEMS ON DEFENSE MANPOWER QUALITY	Eitelberg	OASD, (Force Management and Personnel)
HUMAN RESORCE DEVELOPMENT IN THE DEPARTMENT OF DEFENSE: THE ROLE OF MILITARY SELECTION AND CLASSIFICATION	Eitelberg	OASD, (Force Management and Personnel)
BUDGETING AND ACCOUNTING AT THE CINCPACFLT LEVEL	Euske / L. Jones / J.L. McCaffery	CINCPACFLT
CONTROL OF ILL-DEFINED TECHNOLOGY AND OUTPUT: A FIELD STUDY	Euske	Harvard University

IDENTIFICATION OF INDUSTRIAL PERFORMANCE MEASUREMENT PROCEDURES SUPPORTING THE ACHIEVEMENT OF STRATEGIC OBJECTIVES	Euske / Lebas / McNair	CAM-I
ASSESSING THE EFFECTIVENESS OF OFFICE AUTOMATION SACS IN THE NAVY	Haga	None
ASSESSING THE EFFECTIVENESS OF OFFICE AUTOMATION: APAGE IN THE NAVY	Haga	None
CORPORATE INFORMATION MANAGEMENT IN DOD	Haga	NPS Case Writing Workshop
ECONOMIC ANALYSIS TECHNIQUES IN THE EVALUATION OF INFORMATION SYSTEMS	Haga / Henderson	None
INFORMATION SYSTEM EFFECTIVENESS: VALIDITY OF DATA COLLECTION TECHNIQUES	Haga / Regens	None
PERSONALITY TYPE AND COMPUTER USAGE	Haga / Smith	None
TEN MOST CRITICAL ISSUES IN NAVY I.S. MANAGEMENT	Haga / Zviran	None
AN ECONOMIC ANALYSIS OF NATIONAL SERVICE PROPOSALS	Henderson	OP-1 Chief of Naval Research
NAVY BUDGET JUSTIFICATION AND IMPACT OF BUDGET REDUCTION	L. Jones	NAVCOMPT
DISTRIBUTED DATABASES IN HETEROGENEOUS ENVIRONMENTS: ISSUES AND SOLUTIONS	Kamel	NPS Research Council
CASES IN CONTRACT NEGOTIATIONS	Lamm	National Contract Management Association
ARMY RECRUITING IN THE 21ST CENTURY (Phase II)	Mehay / Eitelberg / G.W. Thomas	US ARMY Recruiting Command
NAVAL POSTGRADUATE SCHOOL MPT RESEARCH SUPPORT OF OP-01	Mehay / Solnick / Henderson / Crawford	DCNO (MPT) OP-01/OP-13

STRATEGIC PROFIT ANALYSIS RESYSTEMIZATION MODELLING SUPPORT	San Miguel McMasters	None Navy Fleet Material Support Office
STOCK POINT EXPERT SYSTEM	McMasters	Navy Supply Systems Command
SOFTWARE FOR U.S. ARMY TOE RESILIENCY SCREENING	Moore	U.S Army Combat Developments Experimentation Center
COST DRIVERS DURING THE ACQUISITION OF MAJOR WEAPON SYSTEMS	Moses	NAVSEA
ENHANCEMENT OF SCHNEIDEWIND SOFTWARE RELIABILITY MODEL	Schneidewind	Navy Surface Warfare Center
SOFTWARE QUALITY METRICS	Schneidewind	IEEE Computer Society Standards Activity Board
ISSUES IN ALLOCATING SERVERS AND FILES IN A Command LOCAL AREA NETWORK	Schneidewind	NAVAIR Systems
COGNITIVE FEEDBACK IN KNOWLEDGE ACQUISITION FOR EXPERT SYSTEMS	Sengupta	Office of Research Administration
COGNITIVE FEEDBACK AND THE DETECTION OF RELEVANT INFORMATION	Sengupta	Office of Research Administration
DECISION SUPPORT IN DYNAMIC ENVIRONMENTS	Sengupta	Office of Research Administration
INCORPORATION DECISION FEEDBACK IN GROUP DECISION SUPPORT SYSTEMS	Sengupta	Office of Research Administration
ANALYSIS OF FIELD AGENTS WRITTEN COMMUNICATION SKILLS	Suchan	Defense Personnel Security Research and Education

OPTIMAL CONFIGURATION OF DISTRIBUTED DATABASE SYSTEMS	Suh	Office of Research Administration
ESTIMATION OF QUALIFIED MILITARY AVAILABLE AND INTERESTED	G.W. Thomas	U.S. Army Recruiting Command
MODELING RESERVE COMMUTE BEHAVIOR	G.W. Thomas	U.S. Army Recruiting Command
USAR NURSE RETENTION/ ATTRITION STUDY	G.W. Thomas	U.S. Army Recruiting Command
BEHAVIOR/ATTITUDINAL SURVEY OF CIVILIAN PERSONNEL DEPARTMENT AND OF ENGINEERS AT THE NAVAL AVIONICS CENTER	K.W. Thomas / B.J. Roberts	Naval Avionic Center
STRATEGIC MANAGEMENT FOR THE DEFENSE DEPARTMENT	Tritten / N. Roberts	Director, OSD/ Net Assessment
BURDEN SHARING, INTERNATIONAL ARMAMENTS COOPERATION AND U.S. MOBILIZATION CAPABILITY	Whipple / Gates / L. Jones / Laurence / Sovereign / Terasawa	Office of the Chief of Staff of the Army
PASSWORD SECURITY: AN EXPLORATORY STUDY	Zviran / Haga	None
EVALUATION OF DATA INTEGRITY MODELS	Zviran	Computer Systems and Architecture Branch, Space and Naval Warfare Systems Command

## **XI. THESES DIRECTED BY ADMINISTRATIVE SCIENCE FACULTY FOR FY90 - FY91**

### **T. ABDEL-HAMID**

Daniel, R. , "Decision Making Heuristics and Biases in Software Project Management: An Experimental Investigation.", M.S. Information Sciences, March 1990, Advised by Abdel-Hamid T.K.

Buzzard, R. , "A Prolog Implementation of Pattern Search to Optimize Software Quality Assurance.", M.S. Information Sciences, March 1990, Advised by Abdel-Hamid T.K.

Agan, C. , "Coupling Artificial Intelligence and a System Dynamics Simulation to Optimize Quality Assurance and Testing in Software Development.", M.S. Information Sciences, March 1990, Advised by Abdel-Hamid T.K.

Martin, B. , "Integrated Financial Reporting for a Small Business.", M.S. Information Sciences, March 1990, Advised by Abdel-Hamid T.K.

### **D. BOGER**

Barnum, T.J., "Characterization of the Ocean Going Barge Industry on the West Coast of the United States", M.S. in Management, June 1990, Advised by D.C. Boger

Boardman, G. , "The International Used Shop Market As A Temporary Solution To U.S. Sealift Requirements", M.S. in Management, June 1990, Advised by D.C. Boger

Schworer, W.J., "Nationwide Mobile Communication Systems", M.S. in Management, June 1990, Advised by D.C. Boger

Smith, J.S., "An Analysis of the Proposed Airline Competition Enhancement Act", M.S. in Management, June 1990, Advised by D.C. Boger

Boone, L.R., "A Cost Estimation Model for the Sea Launch and Recovery Space Transportation System", M.S. in Operations Research, September 1990, Advised by D.C. Boger

Lawson, H., "Operational Procedures for Powering Up, Powering Down, and Configuring the Qualification Model of the FLTSATCOM Satellite", M.S. in Systems Technology, September 1990, Advised by D.C. Boger

## **T. BUI**

David W. Acton, "Implementation of a Distributed Expert System for USN Submarine Shipboard Maintenance using VP-Expert", M.S. in Information Sciences, March 1990, Advised by Bui T.X.

Aaron Rouska "Conversion and Maintenance Issues of Navy Stock Points Expert Systems", M.S. in Information Sciences, March 1990, Advised by Bui T.X.

David England, "Creation of a Knowledge Base for Hazardous Material for the Navy Stock Points Exert Systems", M.S. in Information Sciences, March 1990, Advised by Bui T.X.

David England, "End-User Computing and Information System Planning for ABRI", M.S. in Information Sciences, September 1990, Advised by Bui T.X.

Gary Evans "Identifying Security Problems and Devising Control Strategies for Local Area Networks: A Case Study Approach", M.S. in Information Sciences, September 1990, Advised by Bui T.X.

John Manis III "Applicability of Artificial Intelligence in the Detection of Insurgency", M.S. in Information Sciences, September 1990, Advised by Bui T.X.

William Blazer, "An Integrated Cost Estimation Model for DSS", M.S. in Information Sciences, September 1990, Advised by Bui T.X.

## **P. CARRICK**

Amidon, B.D., "An Economic Analysis of Counterfeit Threaded Fasteners in the Construction Industry", M.S. in Management, June 1990, Advised by P.M. Carrick

Beck, D.J., " Qualitative Fastener Standards: Procurement Issues", M.S. in Management, December 1989, Advised by P.M. Carrick

Grove, D.B., " A Study of Approval Plans and The Government's Ability To Contract For Them Under The Federal Acquisition Regulation (FAR)", M.S. in Management, December 1989, Advised by P.M. Carrick

Johnson, R.J., "Plant Growth Regulators: An Alternative to Frequent Mowing", M.S. in Management, June 1990, Advised by P.M. Carrick

McCarthy, P.J., "A Least Cost Study for Book Procurement at the Naval Postgraduate School Library", M.S. in Management, June 1990, Advised by P.M. Carrick

Natsuhara, K.F.M., "Analysis of the Uniform Building Code", M.S. in Management, December 1989, Advised by P.M. Carrick

Price, L.D. and Sudol, E.G., "Evaluation of Aircraft Turbine Redesigns", M.S. in Management, June 1990, Advised by P.M. Carrick

Sutter, R.D., "The Defense Priorities and Allocation System in an Industrial Mobilization", M.S. in Management, December 1989, Advised by P.M. Carrick

#### **A. CRAWFORD**

Performance of Hispanic-American Enlistees in the Navy", M.S. in Management, December 1989, Advised by M.J. Eitelberg and A.M. Crawford

Johnson, D.M., "Cost Analysis of Two Methods of Instruction In P-3 Fleet Replacement Squadrons", M.S. in Management, June 1990, Advised by L. Gorman and A.M. Crawford

Salter, D.J., "Leadership Styles in United States Marine Corps Transport Helicopter Squadrons", M.S. in Management, December 1989, Advised by A.M. Crawford

White, K.E., "An Analysis of the Requirements for a Windshear Training Program", M.S. in Management, December 1989, Advised by A.M. Crawford

#### **D. DOLK**

Bachteller, J.S., "Design And Implementation of a Prototype Microcomputer Database Management System For the Standardization of Data Elements", M.S. in Information Systems, September 1990, Advised by D.R. Dolk

Barnes, C.A., "Concepts Heirarchies for Extensible Database", M.S. in Information Systems, September 1990, Advised by D.R. Dolk

Myers, J.D., "End-User Computing Strategy in the United States Marine Corps", M.S. in Information Systems, March 1990, Advised by D.R. Dolk and K.J. Euske

## **M. EITELBERG**

Beaty, R.J., "A Study of Reasons For Not Reenlisting: First-Term Marines In Critical Occupations", M.S. in Management, December 1989, Advised by M.J. Eitelberg

Crowe, R.W., "An Analysis Of A Proposed Navy College Fund", M.S. in Management, December 1989, Advised by S.L. Mehay and M.J. Eitelberg

Dropp, A.H., "Unit cohesion and The Navy: Does Cohesion Affect Performance?", M.S. in Management, December 1989, Advised by R.S. Elster and M.J. Eitelberg

Jarvis, J.V. and Gaines, R.J., "A Structure and Data Base For Analyzing the Training School Performance of Hispanic-American Enlistees in the Navy", M.S. in Management, December 1989, Advised by M.J. Eitelberg and A.M. Crawford

Kear, W.J., "Surface Warfare Attrition: Does Ship Type Make A Difference?", M.S. in Management, December 1989, Advised by R.S. Elster and M.J. Eitelberg

Kose, B.S., "Civilian Substitution For Military Personnel: An Analysis of the Issue", M.S. in Management, June 1990, Advised by M.J. Eitelberg

Lofink, L.H.D., "The Effect of Providing On-Site Child Care Services on Personnel Productivity, Morale, and Retention", M.S. in Management, June 1990, Advised by M.J. Eitelberg

McManus, T.M., "An Initial Analysis of the Navy's Sea College Program", M.S. in Management, December 1989, Advised by S.L. Mehay and M.J. Eitelberg

## **R. ELSTER**

Dropp, A.H., "Unit cohesion and The Navy: Does Cohesion Affect Performance?", M.S. in Management, December 1989, Advised by R.S. Elster and M.J. Eitelberg

Gruendl, L.H., "A Comparison of the Managerial Characteristics of Mid-Grade Navy Unrestricted Line Officers", M.S. in Management, December 1989, Advised by R.S. Elster and B.J. Roberts

Kear, W.J., "Surface Warfare Attrition: Does Ship Type Make A Difference?", M.S. in Management, December 1989, Advised by R.S.Elster and M.J. Eitelberg

#### **K. EUSKE**

Myers, J.D., "End-User Computing Strategy in the United States Marine Corps", M.S. in Information Systems, March 1990, Advised by D.R. Dolk and K.J. Euske

Hayden, R.C., Query, M.F. and Snead, L.A., "A Field Study of Control Systems in Environments With Ill-Defined Technology and Output", M.S. in Management, December 1989, Advised by K.J. Euske

McClellan, M.J., "Mandatory Participation in the Direct Deposit System For U.S. Navy Members: Issues and Concerns", M.S. in Management, June 1990, Advised by K.J. Euske

#### **R. EVERED**

Boggs, S.R. , "Job Satisfaction Within The Military Entrance Processing Station and Its Relationship To Quality of Performance", M.S. in Management, June 1990, Advised by R.D. Evered

Bromund, C.D., "Implementing Strategy In A Budget: A Model of the Coast Guard Reserve", M.S. in Management, June 1990, Advised by R. Evered

Kelley, B.D., "Coast Guard Strategic Management: Law Enforcement in the 1990's", M.S. in Management, June 1990, Advised by R.D. Evered

Mellon, J.J., "Marine Corps Financial Management Officer Training in the 1990's", M.S. in Management, June 1990, Advised by R.D. Evered

#### **J. FREMGEN**

Gonzales, D., "Reconciliation of Travel Advances And Travel Liquidations", M.S. in Management, June 1990, Advised by J.M. Fremgen

Holk, G.A., "The Criteria For and Effects of Base Closures", M.S. in Management, December 1989, Advised by J.M. Fremgen

Sakraida, M.J. and Heffernan, J.D., "The VP Readiness System: Correlating Resource to Performance", M.S. in Management, June 1990, Advised by J.M. Fremgen

## **B. FREW**

Brinkley D.E. and Scyoc, P.G., "Distribution of Databases on CD-ROM", M.S. in Information Systems, September 1990, Advised by B.A. Frew

Rodriguez, J.F., "Management Concerns For Optical Based Filing Systems", M.S. in Information Systems, March 1990, Advised by B.A. Frew

Sweitzer, W.F., "Hypermedia and Digital Optical Media Technologies As Applied To A Prototype Geographic and Threat Recognition (GEOTREC) Training and Reference Tool", M.S. in Information Systems, March 1990, Advised by B.A. Frew

## **W. GATES**

Bartlett, W.W. and Strei, T.J., "A Cost Benefit Analysis of Establishing a Warehouse Facility For the Services Division of the Directorate of Personnel and Community Activities at Fort Ord, CA", M.S. in Management, June 1990, Advised by W.R. Gates

## **L. GORMAN**

Johnshoy, D.M., "Cost Analysis of Two Methods of Instruction In P-3 Fleet Replacement Squadrons", M.S. in Management, June 1990, Advised by L. Gorman and A.M. Crawford

Term Air Force Enlisted Members", M.S. in Management, December 1989, Advised by L. Solnick and L. Gorman

Snyder, R.P., "An Empirical Analysis of Enlistment Intentions and Subsequent Enlistment Behavior", M.S. in Operations Research, September 1990, Advised by L. Gorman and G.W. Thomas

## **W. HAGA**

Anderson, S.S. , "Is There A Shortage of Computer Programmers/Systems Analysts? An Examination of the Empirical Evidence", M.S. in Information Systems, September 1990, Advised by W.J. Haga

Beedenbender, M.G., "A Comparison of Password Techniques", M.S. in Information Systems, March 1990, Advised by W.J. Haga and M. Zviran

John, M.O. , "The Effect of Computerization on Production in Administrative Offices: A Comparative Analysis", M.S. in Information Systems, September 1990, Advised by W.J. Haga

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Sablan, S.R., "Improving Datat Quality in the Enlisted Master File", M.S. in Information Systems, March 1990, Advised by W.J. Haga

Sawyer, D.A., "The Characteristics of User-Generated Passwords", M.S. in Information Systems, March 1990, Advised by M. Zviran and W.J. Haga

The'berge, M., "Three Case Studies of Management Information Systems, M.S. in Information Systems, September 1990, Advised by W.J. Haga

McCutchion, D.A., "Use of Aviation 3-M Information Outputs by Organizational Maintenance Users", M.S. in Management, Decembe: 1980, Advised by W.J. Haga

Murphy, R.P. and Davis, L.S., "Personal Computer Use At Navy Field Activities: A Productivity Study", M.S. in Management, March 1990, Advised by W.J. Haga

#### **D. HENDERSON**

Lang, R.G., "Revised Guidance for the Economic Evaluation of DOD Data Processing Systems", M. in Information Systems, September 1990, Advised by W.J. Haga and D.R. Henderson

Son, H.C., "Supply-Side Economics in the Republic of Korea", M.S. in Management, June 1990, Advised by D.R. Henderson

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Naber, J.P., "Allowance Type Code Seven Material: An Analysis of the Current Disposal System", M.S. in Management, December 1989, Advised by T.P. Moore and T.H. Hoivik

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Green, M.J., "The Israeli Defense Forces: An Organizational Perspective", M.S. in Systems Technology, March 1990, Advised by C.R. Jones and R.H. Magnus

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Work, R.O., "Toward A National Space Warfighting Architecture: Forging A Framework for Debate About Space-Based Operational and Tactical Combat Support", M.S. in Systems Technology, September 1990, Advised by C.R. Jones

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Braker, R.J., "U.S./Japan Burdensharing: Constraints To Increase Japanese Contribution", M.S. in Management, June 1990, Advised by L.R. Jones and K. Terasawa

Guerrero, R., "The Implication of the Changes in the Soviet Union and Eastern Europe on NATO-WARSAW Pact Relationship and the U.S. Department of Defense Budget", M.S. in Management, June 1990, Advised by L.R. Jones

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Clemens, D.W., "Relational Database Design of a Shipboard Ammunition Inventory, Requisitioning, and Report System", M.S. in Information Systems, June 1990, Advised by M.N. Kamel

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Downs, D.L., "A Dictionary of Acquisition and Contracting Terms", M.S. in Management, December 1989, Advised by D.V. Lamm

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## **M. McCaffrey**

Chase, J.H., "A Naval Aviation Maintenance Organization Activity Strategic Information System (OASIS)", M.S. in Information Systems, March 1990, Advised by M.J. McCaffrey

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Naber, J.P., "Allowance Type Code Seven Material: An Analysis of the Current Disposal System", M.S. in Management, December 1989, Advised by T.P. Moore and T.H. Hoivik

Rakes, G.H., "An Analysis of Direct Vendor Shipping of Medical Material to Overseas Naval Medical Material", M.S. in Management, December 1989, Advised by T.P. Moore

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Alfini, R.R., "Personal Computer Local Area Network Security In An Academic Environment", M.S. in Information Systems, December 1990, Advised by N.F. Schneidewind

John F. Weigand, "A Proposed Message System Architecture for a Marine Corps base Implementation of the Defense Message System (DM5)", M.S. Telecommunication SYstems, March 1990, Advised by chneidewind N.F.

Greg Rassest, Implementation Considerations to Connect an IBM Token-Ring LAN to the DDN Using TCP/ IP Protocol, M.S. Information Systems, March 1990, Advised by Schneidewind N.F.

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Johnson, R.E. and Peterson, S.W., "A Study of the Naval Military Personnel Command: Internet Connectivity Issues, Requirements, and Recommendations", M.S. in Information Systems, March 1990, Advised by M.W. Suh

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Edwards, L.N., "Effects of Marital/Dependency Status on Reenlistment Behavior of Second-Term Enlisted Females", M.S. in Management, December 1989, Advised by G.W. Thomas

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Theilmann, R.J., "An Analysis of the Factors Affecting Marine Corps Officer Retention", M.S. in Management, September 1990, Advised by G.W. Thomas

Behavior", M.S. in Operations Research, September 1990, Advised by L. Gorman and G.W. Thomas

Woods, W.A., "Analysis of Enlisted Incentives for High Quality Recruits to the United States Army", M.S. in Operations Research, September 1990, Advised by G. Thomas and L. Johnson

Hasselbalch, J.M., "Sources of Job Satisfaction and Dissatisfaction Among Mid-Grade Coast Guard Officers", M.S. in Management, June 1990, Advised by R.A. McGongial and K.W. Thomas

Lindner, T.E. and Davis, M.E., "A Comparative Analysis of Factors Affecting the Career Orientation of Naval Officers and Federal Civilian Engineers", M.S. in Management, March 1990, Advised by B.J. Roberts and K.W. Thomas

#### **D. TRIETSCH**

Cheng, C., "Basic Inventory Management Techniques For The Republic of China Navy", M.S. in Management, December 1989, Advised by D. Trietsch

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Coltellaro, J.J., "Computerized Point of Sales Systems, Morale, Welfare, and Recreation Department Long Beach, California", M.S. in Management, June 1990, Advised by L.J. Zambo

## **M. ZVIRAN**

Beedenbender, M.G., "A Comparison of Password Techniques", M.S. in Information Systems, March 1990, Advised by W.J. Haga and M. Zviran

Sawyer, D.A., "The Characteristics of User-Generated Passwords", M.S. in Information Systems, March 1990, Advised by M. Zviran and W.J. Haga

## **XII. RECENT PUBLICATIONS FOR FY89 - FY91**

Couger, J.D., Borovits, I., Zviran, M., "Comparison of motivating environments for programmer/analysts and programmers in the U.S., Israel, and Singapore", HICSS 22 - Proceedings of the 22nd Hawaii International Conference System Sciences, pp. 316-323, Hawaii, January 1989.

Giladi, R., Zviran, M., "A methodology for CAD/CAM policy formation", Proceedings of the 24th Annual Conference on Data Processing, IPA, Jerusalem, pp. 165-176, November 1989.

Thomas, G., "Preliminary estimates of qualified military available and interested", Proceedings of the 1989 Recruiting Research Coordination Conference

Fann, G., "Management systems Asserting and Reasserting the Role of Business Education", Reston, VA, pp. 181-188, NBEA Association, 1989.

Roberts, N.C., King, P., "The process of public policy innovation Research on the Management of Innovation", vol. 2, A. Van De Ven., S. Poole, and H. Angle (Eds), New York: Ballinger, 1989.

Smeltzer, L., Fann, G., "Analysis of competitors as a source of information in small business management, Advances of Competitive Intelligence, pp. 189-200, Vienna, Virginia: Society of Competitor Intelligence Professionals, 1989.

Abdel-Hamid, T.K., "A study of staff turnover, acquisition, and assimilation and their impact on software development cost and schedule", Journal of Management Information Systems, September 1989.

Abdel-Hamid, T.K., "The dynamics of software project staffing: A system dynamics based simulation approach", IEEE Transactions on Software Engineering, February, 1989.

Abdel-Hamid, T.K., Madnick, S.E., "Software productivity: Potential, actual, and perceived", System Dynamics Review, Summer, 1989.

Abdel-Hamid, T.K., Madnick, S.E., "Lessons learned from modeling the dynamics of software project management", Communications of the ACM, December 1989.

Ahituv, N., Neumann, S., Zviran, M., "Factors affecting the policy for distributed computing resources", MIS Quarterly, vol. 13, no. 4, pp. 389-401, December 1989.

Boger, D.C., Greer, W.R., Liao, S.S., "Competition in defense acquisition: Myths and facts", Defense Analysis, vol. 5, no. 3, pp. 245-255, Fall 1989.

Boger, D.C., Greer, W.R., Liao, S.S., "Competition in defense acquisition: Myths and facts", Defense Analysis, vol. 5, no. 3, pp. 245-255, 1989.

Boger, D.C., Greer, W.R., Liao, S.S., "Separating myths from facts in competitive weapons systems acquisition", Proceedings of the 1989 Acquisition Research Symposium, pp. 201-207, October 1989.

Boger, D.C., Greer, W.R., Liao, S.S., "Separating myths from facts in competitive weapons acquisition", Acquisition Research Symposium, Defense Systems Systems Management College, Fort Belvoir, VA, pp. 201-208, October 1989.

Bradley, R.T., Roberts, N.C., "Relational dynamics of charismatic organization: The complementarity of love and power World Futures", The Journal of General Evolution, 27:87-123, 1989.

Bradley, R.T., Roberts, N.C., "Network structure from relational data", Measurement and inference in four operational models Social Networks, 11(2):89-134, 1989.

Bui, T., "The negotiable alternative identifier (NAI): A solution concept for group decision and negotiation support system", SCIMA Journal of Management Science and Cybernetics, Summer 1989.

Bui, T., "la qualite de la gestion en situation de crise (Managerial decision quality under crisis situations) Die Unternehmung", (Swiss Journal of Management Science), May 1989.

Bui, T., "Non-Cooperation in GDSS: Problems and solutions", SCIMA Journal of Management Science and Cybernetics, Fall 1989.

Dolk, D.R., Kridel, D.J., "Towards a symbiotic expert system for econometric modeling", Proceedings of the 22nd Hawaii International Conference on System Sciences, vol. III, IEEE Computer Society, pp. 3-13, January 1989.

Eitelberg, M.J., "Global trends to the year 2000: Implications for U.S. security", *The Washington Quarterly*, pp. 5-24, Spring 1989.

Eitelberg, M.J., "How to acquire and train skilled personnel to employ and maintain", *Complex developing C3I systems Signal*, pp. 101-103, September 1989.

Evered, R., "Transforming managerial and organizational research: Creating a science that works, *The Handbook for Managerial Research*, 1989.

Evered, R., Selman, J., "Coaching and the art of management", *Organizational Dynamics*, pp. 16-32, Fall 1989.

Fann, G., Lynch, D., "A longitudinal study of attitudes toward the microcomputer as a writing tool", *Office Systems Research Journal*, 1989.

Fann, G., Lynch, D., "Assessing our audience: Business communication students' experiences with and attitudes toward the microcomputer", *Journal of Technical Writing and Communication*, 1989.

Fann, G., Lynch, D., Murranka, P., "Integrating technology: Attitudes as a determinant of the use of the microcomputer in business communication", *Journal of Educational Technology Systems*, 17(4), pp. 307-317, 1989.

Fann, G., Smeltzer, L., "Communication attributes used by small business owner/managers for operational decision making", *Journal of Business Communication*, 26(4), pp. 305-321, 1989.

Fann, G., Smeltzer, L., "The use of information from competitors and about competitors in small business management", *Entrepreneurship: Theory and Practice*, 13, (4), pp. 35-36, 1989.

Gates, W. Department of defense procurement policy reform: An evolutionary perspective", *Journal of Cost Analysis*, Fall 1989.

Haga, W.J., Zviran, M., "Cognitive passwords: Key to easy access control", *Computers and Security*, March 1989.

Haga, W.J., Zviran, M., "Cognitive passwords - From theory to practice", *Data Processing and Communications Security*, vol. 13, no. 3, pp. 19-23, Summer 1989.

Haga, W.J., Zviran, M., "Cognitive passwords: From theory to practice", Data Processing and Communications Security, vol. 13, no. 3, pp.19-23, Summer 1989.

Henderson, D., "The perverse effects of a variable oil import fee", The Energy Journal, vol. 10, no. 4, pp. 159-170, October 1989.

Henderson, D., "safety and economy", Barron's, August 21, 1989.

Henderson, D., "Less good than harm", Barron's, July 31, 1989.

Henderson, D., "The ugly truth about trade", Fortune, June 5, 1989.

Henderson, D., "Who needs a citizens corps?", Barron's, April 24, 1989.

Henderson, D., "Are we all supply-siders now?", Contemporary Policy Issues, vol. VII, no. 4, pp. 116-128, October, 1989.

Henderson, D., "The supply-side tax revenue effects of the child care tax credit", Journal of Policy Analysis and Management, vol. 8, no. 4, pp.673-675, Fall 1989.

Henderson, D., "VIF mortis est: A rejoinder to singer", The Energy Journal, vol. 10, no. 4, pp. 173-174, October 1989.

Henderson, D., "Henderson's law of heroic movies", Reason, July 1989.

Henderson, D., Kriegel, D.A., "Pay comparability: U.S. Navy pilots vs. airline pilots", Armed Forces and Society, vol. 15, no. 2, pp. 271-281, Winter, 1989.

Johnson, L., Thomas, G., "Modeling commute behavior", Proceedings of the 1989 Joint Statistical Meetings, American Statistical Association, Alexandria, VA, August 1989.

Jones, L.R., McCaffery, J.L., "Restraint management in Canada in the 1980's", Greenwood Press, pp. 210, 1989.

Kamel, M.N., Hsiao, D.K., "Heterogeneous databases: Proliferations, issues, and solutions", IEEE Transactions on Knowledge and Data Engineering, vol. 1, no.1, pp. 45-62, March 1989.

Lamm, D.V., "Why firms refuse DoD business: An analysis of rationale", Federal Publications Inc., Washington, DC, 1989.

Liao, S.S., "Modifications and extensions: Applying the learning curve formula", *Program Manager*, vol. XVIII, no. 3, pp. 40-46, May-June, 1989.

McCaffery, J.L., "Strategies for achieving budgetary goals", *Handbook of Public Administration*, Jossey-Bass: San Francisco, London, pp. 290-301, 1989.

McCaffery, J.L., "Making the most of strategic planning and management", *Managing Public Programs*, Jossey Bass: San Francisco- London, pp. 193-210, 1989.

McCaffery, J.L., "Reflections on the deficit Newsletter Section on Budgeting and Financial Management", *American Society for Public Administration*, pp. 3-4, Winter 1989.

Mehay, S., Gonzalez, R., Folsom, R., "Bureaucracy publicness and local government expenditures revisited", *Public Choice*, vol. 62, no. 1, pp. 71-78, July 1989.

Mehay, S., Looney, R., "Casual factors in U.S. postwar defense spending: The empirical dimension", *Defense Analysis*, vol. 5, no. 2, June 1989.

Moses, O.D., "The impact of accounting procedures on learning rates", *Proceedings of the 1989 Annual Meeting of Decision Sciences, Institute*, pp. 123-125, November 1989.

Moses, O.D., "Determinants of contractor pricing strategy", *Program Manager*, pp. 32-43, July-August 1989.

Roberts, N.C., King, P., "Public management executives: Charting a course amidst the political swirl", *Organizational Dynamics*, pp. 63-79, Winter, 1989.

San Miguel, J., "H.H. Heinz Company and NCR Corporation", *Financial Accounting and Corporate Reporting: A Casebook*, 2nd Edition, BPI/IRWIN, 1989.

Schneidewind, N.F., "Distributed system software design paradigm with application to computer networks", *IEEE Transactions on Software Engineering*, vol. 15, no. 4, pp. 402-412, April 1989.

Schneidewind, N.F., "Scanning the issue - special section on software maintenance", *Proceedings of the IEEE*, vol. 77, no. 4, pp. 507-508, April 1989.

Schneidewind, N.F., "Software maintenance: The need for standardization", Proceedings of the IEEE, vol. 77, no. 4, pp. 618-624, April 1989.

Smeltzer, L., Fann, G., "Correlations among organizational climate, apprehension about communication, and locus of control in mid-level bank managers", Psychological Reports, 64, pp. 1143-1146, 1989.

Smeltzer, L., Fann, G., "External networking: Differences by gender", Journal of small business management, 27(2), pp. 25-32, 1989.

Smeltzer, L., Fann, G., "Comparison of managerial communication patterns in small entrepreneurial and large, mature organizations Group and Organizational Studies, 14(2), pp. 198-215, 1989.

Solnick, L.M., "Marital status, children and female quitting", Proceedings of the 41st Annual Meeting, Industrial Relations Research Association, 1989.

Suchan, J., Colucci, R., "Communication efficiency between high-impact and bureaucratic written communication", Management Communication Quarterly, vol. 2, no. 4, pp. 452-484, Spring 1989.

Zviran, M., Blow, R., "A computer-based diabetes monitoring system", Journal of Medical Systems, vol. 13, no. 5, pp. 293-308, October, 1989.

Boger, D.C., Greer, W.R., Liao, S.S., "Competitive weapon systems acquisition: Myths and facts", Prepared for the Naval Postgraduate School, NPS-54-89-04, March, 1989.

Boger, D.C., Liao, S.S., "Competitive weapon systems acquisition: Myths and facts", Prepared for the Naval Postgraduate School, NPS-5-89-04, March 1989.

Dolk, D.R., Euske, K-I., "End-user computing control strategies: An analysis of two organizations", Prepared for the Naval Postgraduate School, NPS-54-89-012, October 1989.

Gates, W., "Department of defense procurement policy reform: An evolutionary perspective", Prepared for the Naval Postgraduate School, NPS-54-89-01, January 1989.

Gorman, L., Thomas, G., "An analysis of enlistment motivations for the United States Army reserve recruits", Prepared for the Naval Postgraduate School, NPS-54-90-003, November 1989.

Henderson, D., "Child care tax credits: A supply-side success story, National Center for Policy Analysis, Policy Report no. 40, July 1989.

Mehay, S., "An enlistment supply and forecasting model for the U.S. Army reserve", Prepared for the U.S. Army Recruiting Command, Ft. Sheridan, ILL, USAREC SR-89-2, July 1989.

Moses, O.D., "Estimating and controlling the cost of extending technology: A revision and extension", Prepared for the Naval Postgraduate School, NPS-54-89-06, March 1989.

Moses, O.D., "Estimating and explaining the cost of high-technology systems: The case of military aircraft", Prepared for the Naval Postgraduate School, NPS-54-89-07, May 1989.

Roberts, B.J., "Managing planned change: A decade of experience in American military organizations", Prepared for the Naval Postgraduate School, NPS-54-89-05, 1989.

Schneidewind, N.F., "Software maintenance: The need for standardization", Prepared for the Naval Postgraduate School, NPS-54-89-02 February 1989.

Schneidewind, N.F., "How a standardized change management methodology can improve software maintenance", Prepared for the Naval Postgraduate School, NPS-54-89-09, May 1989.

Suchan, J., "Investigative report writing: A field study", Defense Personnel Security Research and Educational Center, PERS-SR-89-009, 34 pages, March 1989.

Thomas, G., Kocher, K., Roberts, B., "1987 U.S. Army membership, accession and loss profiles: Volume II, active duty", Prepared for the Naval Postgraduate School, NPS-54-89-10, June 1989.

Trietsch, D., "Polynomial transfer lot sizing techniques for batch processing on consecutive machines", Prepared for the Naval Postgraduate School, NPS-54-89-011, 1989.

Baker, K., McCaffery, J.L., "Optimizing Choice in Resource Decisions: Staying Within the Boundary of the Comprehensive-Rational Method", Public Administration Quarterly, Summer, 1990.

Couger, J.D., Adelsberger H., Borovits, I., Zviran M., Motiwalla, J., "Commonalities in Motivating Environments for Programmer/Analysts in Austria, Israel, Singapore, and the U.S.", *Information & Management*, Vol. 18, No. 1, January 1990, pp. 41-46.

Dolk, D., "Control Strategies for Group Decision Support Systems: An End-User Computing Model.", *European Journal of Operations Research*, 46, 247-259, 1990.

Eitelberg, M.J., "Department of Defense, Human Resource Development in the Department of Defense: Issues and Initiatives for Military Selection and Classification", A report to the House and Senate Committees on Armed Services (Washington, D.C.: Office of the Assistant Secretary of Defense (Force Management and Personnel), July 1990).

Euske, K.J., Dolk, D.R., "Control strategies for GDSS: An end-user model", *European Journal of Operations Research*, 1990.

Gonzalez, R., Mehay, S., "Publicness, Scale, and Spillover Effects in Defense Spending", *Public Finance Quarterly*, Vol. 18, No. 3, July 1990, pp. 273-290.

Kamel, M.N., Davidson, S.B., "Semi-Materialization: A Technique for Optimizing Frequently Executed Queries", *Data & Knowledge Engineering*, Vol. 5, pp. 93-103, 1990.

Kang, K., "Book Review of Discrete Simulation: Fundamentals and Microcomputer Support by G.L. Curry et. al.", *Journal of Quality Technology*, Vol. 22, No. 2, pp. 168-169, April 1990.

Henderson, David R., "The Case for National Service", A review of A Call to Civic Service by Charles Moskos *Fortune*, January 1, 1990, pp. 109-110.

Henderson, David R., Comment in Williamson Evers, ed., "National Service: Pro and Con", Stanford: Hoover Institution Press, 1990, pp. 209-214.

Johnson, L., Thomas, G., "A Maximum Likelihood Method for Characterizing Part-Time Commute Behavior", *Proceedings of the 1990 Joint Statistical Meetings*, August 1990.

Jones, L.R., "Burden Sharing Among America and Its Allies", *Western Politically Quarterly*, 18/1, 1990.

Jones, L.R., "Municipal Bonds and Public Utility Financing: Municipal Buy Outs and Takeovers", *Municipal Finance Journal*, 11/2, 1990.

Jones, L.R., "Burden Sharing Among America and Its Allies", *Western Political Quarterly*, 18/1, 1990.

Jones, L.R., "Strategic Misrepresentation in Budgeting", *Research in Public Administration*, December 1990.

Jones, L.R., "Strategic Planning and Resource Allocation in National Defense", *Public Budgeting and Financial Management*, 3/3, 1990.

Jones, L.R., "Public Financial Management Curriculum Reform in P. Bergstrom", ed., *Public Policy Education*, (Wesport, CT: Greenwood Press, 1990).

Kang, K., Goldsman, D., "The Correlation between Mean and Variance Estimators in Computer Simulation", *IIE Transactions*, Vol. 22, No. 1, pp. 15-23 March 1990.

Kang, K., "Book Review of Discrete Simulation: Fundamentals and Microcomputer", Support by G.L. Curry et. al., *Journal of Quality Technology*, Vol. 22, No. 2, pp. 168-19, April 1990.

Kang, K., Schmeiser, B.W., "Graphical Evaluation and Comparison of Confidence-Interval Procedures", *Operations Research*, Vol. 38, pp. 546-553, May-June 1990.

Lamm, D.V., "Certification-Professionalism in Action, Contract Management", Vol. 30, Issue 6, pp. 10-13.

McMasters, A.W., "Relation Between GDSS use and Group Task Complexity: An Experimental Study", *Proceedings of the 23rd Hawaii International Conference on System Sciences (HICSS)*, January 1990.

Mehay, S., Solnick, L., "Defense Spending and State Economic Growth", *Journal of Regional Science*, Vol. 30, No. 4, 1990, pp. 447-487.

Mehay, S., "Determinants of Enlistments in the U.S. Army Reserve", *Armed Forces & Society*, Vol. 16, No. 3, Spring 1990, pp. 351-367.

Moore, T.P., Clarke, J.D., "Problems Identified in the RAN Initial Provisioning Model", Journal of the Royal Australian Navy Supply Support Organization, Vol. 3, No. 4, pp. 41-51, June 1990.

Moses, D.O., "On Analysts' Earnings forecasts for Failing Firms", Journal of Business Finance and Accounting, Spring 1990, pp. 101-118.

Schneidewind, N.F., "Fourth Software Engineering Application Workshop", IEEE Computer, Vol. 23, No. 9, September 1990, p. 124.

Suh, J., Dulek, R., "A Reassessment of Clarity in Written Managerial Communications", Management Communication Quarterly, Vol. 4, No. 1, August 1990, 87-99.

Suchan, James, Dulek, R., "A Reassessment of Clarity in Written Managerial Communications", Management Communication Quarterly, Vol. 4, No. 1, August 1990, 87-99.

Texidor, M., Roberts, B., "Added Perspective, Education, Recognition: Why Nurses Join and Stay", Military Medicine, Spring 1990.

Zviran, M., Haga, W.J., "Cognitive Passwords: The Key to Easy Access Control", Computers and Security, Vol. 9, pp. 723-736, December, 1990.

Zviran, M., "Defining the Application Portfolio for an Integrated Hospital Information System: A Tutorial", Journal of Medical Systems, Vol. 14, No. 1/2, April 1990, pp. 31-41.

Zviran, M., "Relationship Between Organizational and IS Objectives: Some Empirical Evidence", Journal of Management Information Systems, Vol. 7, No. 1, Summer 1990, pp. 65-84.

Zviran, M., "Design Considerations for Integrated Hospital Information System", Hospital & Health Services Administration, Vol. 35, No. 7, Fall 1990, pp. 377-393.

Zviran, M., Hoge, J., Micucci, V., "SPAN - A DSS for Security Plan Analysis", Computers & Security, Vol. 9, No. 2, April 1990, pp. 153-160.

Zviran, M., Haga, W.J., "Password Security: An Exploratory Study", Communications of the ACM

Bhargava, H.K., Krishnan, R., "A Formal Approach for Model Formulation in a Model Management System", Proceeding of the twenty-third Hawaii International Conference on System Sciences, Kona 1990.

Bhargava, H.K., Kimbrough, S.O., "On Embedded Languages for Model Management", Proceeding of the twenty-third Hawaii International Conference on System Sciences, Kona 1990.

Garrabrants, W.M., Ellis, A.W., Hoffman, L.J., Kamel, M.N., "CERTS: A Comparative Evaluation Method for Risk Management Methodologies and Tools", Proceedings of the Sixth Annual Computer Security Applications Conference, Tucson, AZ, December 1990.

Giladi, R., Zviran, M., "The Impact of Improvements in Hardware Technology On Information Systems Distribution Patterns", Proceedings of the Twenty-fifth Annual Conference on Data Processing, Jerusalem, Israel, October, 1990, pp. 63-77.

Haga, W.J., Zviran, M., "Comparison of Password Techniques", Proceedings of COMPSEC-90 International, London, October 1990.

Haga, W.J., Zviran, M., "User Authentication by Cognitive Passwords: An Empirical Assessment", Proceedings of the Fifth Jerusalem Conference on Information Technology, Jerusalem, October 1990.

Hall, J.E., Hsiao, D.K., Kamel, M.N., "The Multibackend Database System (MDBS): A Performance Study", Proceedings of the International Conference on Databases, Parallel Architectures, and their Applications, Miami Beach, FL, March 1990, pp. 139-143.

Hsiao, D.K., Kamel, M.N., "The Federated Databases and System: A New Generation of Advanced Database Systems", Proceedings of the International Conference on Database and Expert Systems Applications, DEXA 90, Vienna, Austria, August 1990, pp. 186-190.

Kamel, M.N., "Interoperability and Integration Issues in Heterogeneous Database Environments", Proceedings of the Seventh Annual Database Colloquium, Database '90, San Diego, CA, June 1990.

Kamel, M.N., "The Federated Database Management System: An Architecture of Distributed Systems for the 90's", Proceedings of the Second IEEE Workshop on Future Trends of Distributed Computing Systems, Cairo, Egypt, September 1990, pp. 346-352.

Kamel, M.N., Lekey, R.W., "ACMS: A Prototype Expert Database System for Air Combat Maneuvering", Proceedings of the International Conference on Information Management, San Bernardino, CA, May, 1990.

Kamel, M.N., Davidson, S.B., "Redundancy: An Approach to the Efficient Implementation of Semantic Integrity Assertions", Proceedings of the Twenty-Third Annual Hawaii International Conference on System Sciences, Kailua-Kona, HI, January 1990, pp. 393-399.

Lamm, D.V., "Theories and Techniques for Contract Management Research", Proceedings of the Third Annual Academic Conference for Contract Management Educators, August, 1990.

McMasters, A.W., "An Architecture for Distributed Knowledge-based GDSS", Proceedings of the IFORS-90, June 1990, Athens, Greece

McMasters, A.W., "Multiple Criteria Decision Support Systems: Matching Methods to Domain Applications", Proceedings of the IFORS-90, June 1990, Athens, Greece

Moses, O.D., "Organizational Slack and the Riskiness of Product Pricing Strategy", Proceedings of the Decision Sciences Institute National Meeting, San Diego, CA, November 1990, pp. 1459-1461.

Schneidewind, N.F., "The Effects of High Speed Networking on the Operation of a Distributed System Software Design Paradigm", Proceedings of Future Trends '90, Second IEEE Workshop on Future Trends of Distributed Computing Systems, September 30 - October 2, 1990, Cairo, Egypt, pp. 161-164.

Schneidewind, N.F. "Special Issues in Local Area Network Software/Hardware Configuration Management and Maintenance", Proceedings of Networks Track, Systems Design and Network Conference, IEEE, Santa Clara, CA, May 8-10, 1990, pp. 46-59.

Thomas, G.W., Kocher, K., "A Nurse Turnover Model", Proceedings of the Western Decision Sciences Institute 1990 Meeting, March 1990.

Zviran, M., Haga, W.J., "User Authentication by Cognitive Passwords: An Empirical Assessment (JCIT-5)", Proceedings of the 5th Jerusalem Conference on Information Technology, Jerusalem, Israel, pp. 137-144, October 1990.

Zviran, M., "Organizational and IS Objective: An Exploratory Study", Proceedings of DSI-90, San Diego, November 1990.

Boger, D.C., Liao, S.S., "Aircraft Modifications Cost Analysis, Volume 1: Overview of the Study", Prepared for Naval Air Systems Command, NPS-54-90-005, February 1990.

Boger, D.C., Liao, S.S., "Aircraft Modifications Cost Analysis, Volume 2: C-141B Stretch Program", Prepared for Naval Air Systems Command, NPS-54-90-009PR, April 1990.

Boger, D.C., Liao, S.S., "Aircraft Modifications Cost Analysis, Volume 3: C-5A Wing Modification Program", Prepared for Naval Air Systems Command, NPS 54-90-018PR, July 1990.

Boger, D.C., Liao, S.S., "Competition in Weapon Systems Acquisition: Cost Analyses of Some Issues", Prepared for Naval Center For Cost Analysis Division, NPS-54-90-021, September 1990.

Boger, D.C., Liao, S.S., "The Effects of Different Production Rate Measures and Cost Structures on Rate Adjustment Models", Prepared for Naval Air Systems Command Cost Analysis Division, NPS-54-90-006, February 1990.

Garrabrants, W.M., Ellis, A.W., Hoffman, L.J., Kamel, M.N., "CERTS: A Comparative Evaluation Method for Risk Management Methodologies and Tools", Prepared for the Naval Postgraduate School, NPS-54-90-013, June 1990.

Gorman, L., Mehay, S., "Estimating Local Area Propensity for the USAR: A Feasibility Analysis", Prepared for U.S. Army Recruiting Command, NPS-54-90-004, February 1990.

Haga, W.J., Zviran, M., "Password Security: An Exploratory Study", Prepared for the Naval Postgraduate School Research Foundation, NPS-54-90-011, May 1990.

Henderson, D.R., Haga, W.J., "How to Account for Inflation When Taking Present Values", Prepared for OP-1 (Chief of Naval Research), NPS-54-90-020, September 1990.

Kamel, M.N., Lekey, R.W., "ACMS: A Prototype Expert Database System for Air Combat Maneuvering", Prepared for the Naval Postgraduate School, NPS-54-90-002, March 1990.

Kang, K. Bailey, M.P., Eu, J.H., "Statistical Properties of Out-of-frame Detection Schemes for Digital Transmissions Systems", Prepared for the Naval Postgraduate School, NPS-55-90-05, January 1990.

Moses, O.D., "Extensions to the Learning Curve: An Analysis of Factors Influencing Unit Cost of Weapon System", Prepared for the Naval Postgraduate School, NPS-54-90-016, May 1990.

Roberts, B.J., Thomas, K.W., Davis, M.E., "1990 Naval Avionics Center Scientist and Engineer Profile", Prepared for the Naval Postgraduate School, NPS-54-90-010, July 1990.

Roberts, B.J., Thomas, K.W., Davis, M.E., "An Analysis of the Factors Affecting the Career Orientation of Federal Civilian Engineers", Prepared for the Naval Postgraduate School, NPS-54-90-015, July 1990.

Roberts, B.J., Thomas, K.W., Davis, M.E., "1989 Naval Avionics Center Civilian Personnel Department Profile", Prepared for the Naval Postgraduate School, NPS-54-90-017, July 1990.

San Miguel, J.G., "Basic Financial Accounting System", Prepared for the Engineering Duty Officer School, Management Development Course, November 1990.

Schneidewind, N.F., "Validating Software Metrics", Prepared for the Naval Postgraduate School, NPS-AS-90-019, September 1990.

Suh, M.W., "Allocation of Data and Data Processing Resources in Distributed Database Systems: A Survey of Models and Algorithms", Prepared for the Naval Postgraduate School, NPS-54-90-012, January 1990.

Thomas, G., Kocher, K., "A Retention Model for Army Nurses", Prepared for the Naval Postgraduate School, NPS-54-90-007, January 1990.

Zviran, M., "Applying Analytical Hierarchies to Computer-Family Selection Procedure", Prepared for the Naval Postgraduate School, NPS-54-90-008.

Zviran, M., "Password Security", Prepared for the Naval Postgraduate School, NPS-54-90-011

Zviran, M., Haga, W.J., "A Comparison of Password Techniques for Multilevel Authentication Mechanisms", Prepared for the Naval Postgraduate School, NPS-54-90-014, May 1990.

Schneidewind, N.F., "Fourth Software Engineering Application Workshop", IEEE Computer, Vol. 23, No. 9, September 1990, p. 124.

Boger, D.C., Liao, S.S., "The Effects of Different Production Rate Measures and Cost Structures on Rate Adjustment Models", Chapter in Cost Analysis and Estimating: Tools and Techniques, pp. 82-98, Springer-Verlag, 1990.

Looney, R., Mehay, S., "United States Defense Expenditures: Trends and Analysis", Economics of Defense Spending: An International Survey, London and New York: Routledge, 1990.

Moses, O.D., "Estimating and Explaining the Cost of High-Technology Systems", Cost Analysis and Estimating Tools and Techniques, pp. 30-63, Springer-Verlag, New York, 1990.

Moses, O.D., "Learning Curve and Rate Adjustment Models: Comparative Prediction Accuracy Under Varying Conditions", Technical Report NPS-AS-91-001, Naval Postgraduate School, Monterey, CA 93943, November, 1990

Moses, O.D., "Learning curb & Rate Adjustment Models: An Investigation of Bias", Technical Report NPS-AS-91-005, February, 1991

Kocher, K. and Thomas G., "Gender Differences in the Retention of Enlisted Army Reservists", Technical Report NPS-AS-91-002, Naval Postgraduate School, Monterey, CA 93943, December 1990

Thomas, G., Roberts B. and Kocher D., "Recruiting and Retaining Army Nurses: An Annotated Bibliography", Technical Report NPS-AS-91-003, Naval Postgraduate School, Monterey, CA 93943, December, 1990

Kocher, K. and Thomas, G., "USAR Enlisted Loss Profiles", Technical Report NPS-AS-91-004PR, Naval Postgraduate School, Monterey, CA 93943, Naval Postgraduate School, Monterey, CA 93943, November, 1990

Boger, D.C. and Liao, S.S., "Aircraft Modification Cost Analysis Vol. 4: S-3A Increased Capacity Auxiliary Power Unit", Technical Report NPS-AS-91-006PR, Naval Postgraduate School, Monterey, CA 93943, March, 1991

Boger, D.C. and Liao, S.S., "Aircraft Modification Cost Analysis Vol 5: S-3A Weapon System Improvement Program", Technical Report NPS-AS-91-007PR, Naval Postgraduate School, Monterey, CA 93943, April, 1991

Roberts N.C., "Limitations of Strategic Management in Bureaus: The Case of The Department of Defense", Technical Report NPS-AS-91-008, Naval Postgraduate School, Monterey, CA 93943, April, 1991

Kang, K., Bailey, M.P. and Callahan, A.J., "Establishing Reliability Goals for Naval Major Caliber Ammunition", NPS-AS-91-009, Naval Postgraduate School, Monterey, CA 93943, March, 1991

Bhargava, H.K., "Dimensional Analysis in Mathematical Modeling Systems: A Simple Numerical Method", Technical Report NPS-AS-91-010, Naval Postgraduate School, Monterey, CA 93943, February, 1991

Bhargava, H.K. and Beyer, R.M., "Automated Detection of Naming Conflicts in Schema Integration: Experiments with Quiddities\*", Technical Report NPS-AS-91-011, Naval Postgraduate School, Monterey, CA 93943, May, 1991

Boyer, D.C. and Liao, S.S., "Aircraft Modifications Cost Analysis, Vol 6: Offensive Avionics System & Cruise Missile Integration of the B-52 Stratofortress", Technical Report NPS-AS-91-0121, Naval Postgraduate School, Monterey, CA 93943, July, 1991.

## REFERENCES

1. Naval Postgraduate School, *Naval Postgraduate School Catalog*, 1991.
2. The Wharton School of the University of Pennsylvania, *Doctoarl Program 1990-1991*, 1990.
3. Graduate School of Industrial Administration of Carnegie Mellon, *The Ph.D. Program*, 1986.
4. Graduate School of Business Administration of the University of California at Berkeley, *The Ph.D. Program 88-89*, 1988.
5. Department of Mathematics at the Naval Postgraduate School, *Request To The Academic Council For Approval Of A Ph.D. Program In Applied Mathematics*, Naval Postgraduate School, Monterey, CA, 1991.
6. Department of Computer Science at the Naval Postgraduate School, *The Ph.D. and Master's Programs in Computer Science at The Naval Postgraduate School*, Naval Postgraduate School, Monterey, CA, 1983.
7. Naval Postgraduate School Academic Council, *Policy Manual*, NPS Printing Office, Monterey, CA, 1991.
8. Naval Postgraduate School summary Report NPS-012-82-002PR, *Recent Naval Postgraduate School Publications*, April 1982.
9. Naval Postgraduate School summary Report NPS-012-83-002PR, *Recent Naval Postgraduate School Publications*, May 1983.
10. Naval Postgraduate School summary Report NPS-012-84-002PR, *Recent Naval Postgraduate School Publications*, June 1984.
11. Naval Postgraduate School summary Report NPS-012-85-002PR, *Recent Naval Postgraduate School Publications*, 30 September 1985.
12. Naval Postgraduate School summary Report NPS-012-86-005, *Recent Naval Postgraduate School Publications*, 30 September 1985.
13. Naval Postgraduate School summary Report NPS-012-87-003, *Recent Naval Postgraduate School Publications*, 30 September 1986.

14. Naval Postgraduate School summary Report NPS-012-88-002, *Recent Naval Postgraduate School Publications*, 30 August 1988.
15. Naval Postgraduate School summary Report NPS-012-89-002, *Recent Naval Postgraduate School Publications*, 1989.
16. Naval Postgraduate School summary Report NPS-012-90-002, *A Summary Of The Naval Postgraduate School Research Program and Recent Publications*, 30 August 1990.
17. Naval Postgraduate School Summary Report NPS-012-82-003PR, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, April 1982.
18. Naval Postgraduate School Summary Report NPS-012-83-003PR, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, April 1983.
19. Naval Postgraduate School Summary Report NPS-012-84-004PR, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, June 1984.
20. Naval Postgraduate School Summary Report NPS-012-86-004, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, 30 September 1986.
21. Naval Postgraduate School Summary Report NPS-012-87-001, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, 30 September 1987.
22. Naval Postgraduate School Summary Report NPS-012-88-001, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, 30 August 1988.
23. Naval Postgraduate School Summary Report NPS-012-89-001, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, June 1989.
24. Naval Postgraduate School Summary Report NPS-012-90-001, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, 1990.
25. Naval Postgraduate School Summary Report NPS-012-91-001, *Compilation Of Abstracts Of Theses Submitted By Candidates For Degree*, 1991.
26. Interview between B. Carr, Assistant Librarian, Dudley Knox Library, Naval Postgraduate School, Monterey, CA, and LT Robert D. Randall Jr., 25 February 1992.

## BIBLIOGRAPHY

Birch, Jack W. and Mauch, James E., *Guide to the Successful Thesis and Dissertation*, 2d ed., Marcel Dekker, Inc., 1989.

Graduate School of Management of the University of California Los Angeles, *M.S./Ph.D. Programs*, 1986.

Jennings, E.T., "Accountability, Program Quality, Outcome Assessment, and Graduate Education for Public Affairs and Administration", *Public Administration Review*, September/October 1989.

Naval Postgraduate School, *Course Catalog Academic Year 1990*, 1990.

Naval Postgraduate School, *Sixth Annual Report To The Graduate Education Review Group* by RADM Robert C. Austin, November 1988.

U.S. Department of Health, Education, and Welfare, Office of Education, *Accreditation in Higher Education*, Government Printing Office, Washington, DC, 1959.

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